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EFFECTS OF INDUCED MOOD ON COGNITIVE PROCESSING IN HEALTHY OLDER AND HEALTHY YOUNGER ADULTS

by

Laura J. Kitzan
Master of Arts, University of North Dakota, 1996

A Dissertation

Submitted to the Graduate Faculty

of the

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in partial fulfillment of the requirements

for the degree of

Doctor of Philosophy

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K627

This dissertation submitted by Laura J. Kitzan in partial fulfillment of the requirements for the Degree of Doctor of Philosophy from the University of North Dakota, has been read by the Faculty Advisory Committee under whom the work has been done and is hereby approved.

(Chairperson)

This dissertation meets the standards for appearance, conforms to the style and format requirements of the Graduate School of the University of North Dakota, and is hereby approved.

Dean of the Graduate School

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Date 4-2-01

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To

my husband,
Cory Kitzan

and

my parents,
Richard and Barbara Anderson

ABSTRACT

Studies of young adults have shown that in the presence of intense mood states (e.g., sad), the frequency of task-irrelevant, mood-related thoughts increase and interfere with task performance. Gunther, Ferraro, and Kirchner (1996) tested induced-mood effects on long-term-memory (LTM) recognition of young adults as the recognition task became more difficult. The sad group had longer reaction times (RT) and higher error rates at the toughest recognition level than the neutral group. Gerard, Zacks, Hasher, and Radvansky (1991) studied age-related changes on LTM retrieval using the same paradigm. While the younger and older adults had longer RT and higher error rates at the most difficult recognition level, the magnitude of these differences was greater for the older adults than the younger adults. The present study investigated age differences in the effects of induced moods on LTM retrieval. Although 73 older adults and 126 younger adults participated in the study, many had difficulty completing the memorization task. Thus only 30 older and 97 younger adults completed the study. Those participants were randomly assigned to mood groups and an induction procedure was conducted. The mean of the participants' median RT and error rates were collected during a speeded recognition task where participants distinguished between prelearned and unlearned sentences. First, it was predicted that older adults would have longer RT and higher error rates than younger adults. Second, the sad group was predicted to have longer RT and higher error rates than the neutral group. Third, the sad-older adults' RT and error rates

were predicted to differ more from the neutral-older adults' than would the sad-younger adults' differ from the neutral-younger adults'. These differences, for all three predictions, were expected to increase as recognition difficulty increased. While the study found that older adults made proportionally more errors as the recognition difficulty increased than did the younger adults, none of the other predictions were confirmed by the current study. This may have been the result of low power due to the small proportion of participants who completed the study and whose mood was successfully altered.

CHAPTER I

Introduction

Emotions and Inhibition

Over the past few decades, cognitive psychologists have considered how emotional mood states relate to a person's thoughts and actions. Specifically, many studies of younger adults have shown that in the presence of intense mood states (e.g., sad, anxious, happy) the frequency of task-irrelevant, mood-related thoughts increase, thus interfering with task performance (Ellis, 1985; Ellis & Ashbrook, 1989; Ellis, Thomas, McFarland, & Lane, 1985; Ellis, Thomas, & Rodriguez, 1984; Leight & Ellis, 1981; Lubin, 1965; Sarason, Sarason, Keefe, Hayes, & Shearin, 1986; Seibert & Ellis, 1991a, 1991b; Sherwood, Schroeder, Abrami & Alden, 1981).

Ingram, Kendall, Smith, Donnell, and Ronan (1987) found that depressed, as well as anxious, younger adults attend to mood-congruent information. In their study, the depressed participants selectively attended to depressing information and anxious participants selectively attended to anxious information. This tendency to attend to mood-congruent information was associated with an increase in task-irrelevant thoughts and a decrease in performance. Ellis et al. (1984) found that younger adults induced with a sad mood had significantly lower recall on a variety of tasks than did subjects induced with a neutral mood. Similarly, Ellis et al. (1985) found that in an induced-mood state, younger adults recalled significantly fewer words previously learned in a neutral state

even in the presence of cues. Similarly, it has been demonstrated that both happy and sad induced-mood participants reported greater proportions of irrelevant thoughts and had poorer memory performance than did control participants (Seibert & Ellis, 1991b). When considered together, these studies suggest that intense induced-mood states and the associated increases in mood-related, task-irrelevant thoughts decrease the amount of resources allocated to the encoding or retrieval task thus negatively influencing performance.

Task-irrelevant thoughts are operationally defined as any thoughts that are not related to the task at hand and deter attention or resources away from the task at hand. Task-relevant thoughts relate directly to the task, focus attention on the task, and generally improve performance on the task (Ellis & Ashbrook, 1988; Ellis et al., 1985; Hasher & Zacks, 1988; Seibert & Ellis, 1991b).

The attention allocated to a task by participants can be understood by considering inhibition theory, first suggested by Hasher and Zacks (1988). They proposed that irrelevant information might taint or interfere with the processing of relevant information. Within this theory working memory is viewed as a fixed commodity and when operating effectively, only task-relevant information is processed. Hasher and Zacks (1988) suggest the working memory utilizes an inhibitory mechanism to screen out task-irrelevant information thus allowing the working memory to continue processing uninterrupted. Therefore, if in the presence of intense mood states, mood-related, task-irrelevant thoughts were permitted into the working memory, this would decrease performance on the task.

Aging and Inhibition

Hasher and Zacks (1988) considered how age-related declines in cognitive functioning might be related to this inhibitory mechanism in working memory. They proposed that age-related declines in cognitive functioning might be due to a reduced ability to inhibit irrelevant or nongoal path information from entering working memory. This deficit would reduce the amount of attention available to focus on relevant information and affect one's ability to shift attention from one topic to another. An individual demonstrating reduced inhibitory functioning may predictably show more distractibility, take longer to respond or reply, and/or may make comments that seem irrelevant to the conversation. These authors concluded that the inefficiency of the inhibitory mechanism permits more task-irrelevant information to enter and remain in the working memory. Not only does this result in less working memory resources being available for processing the task-relevant cognitive functions, but memory links created in the mental lexicon during encoding will be linked not only with the task-relevant information but also the task-irrelevant information. Therefore, during recall or recognition tasks, response time will be slowed because the memory links for the task-relevant information are tied to the task-irrelevant information leading to increased confusion, response times, and error rates (Hasher & Zacks, 1988).

Negative Priming. Many researchers have examined this reduced inhibition phenomenon using a negative priming paradigm. In a negative priming paradigm, two stimuli are presented on a computer screen simultaneously. The participants are told to ignore one stimulus (e.g., one colored blue) while attending and responding to another

stimulus (e.g., one colored red). In the next screen, the previously to-be ignored stimulus is in the to-be-attended color and the participant is expected to respond to it. Older and younger adults both correctly identify the to-be-attended stimulus in the first screen. However, on the second screen, the younger adults tend to respond slower to the previously to-be-ignored stimulus suggesting that their inhibitory mechanisms have successfully blocked the to-be-ignored stimulus from entering the working memory at least for a time. This slowing is called a negative priming effect (Mari-Beffa, Fuentes, Catena, & Houghton, 2000). Older adults do not usually show the negative priming effect in that their response times to the previously to-be-ignored stimulus are not slowed. This suggests that their inhibitory mechanism did not block the to-be-ignored stimulus from the working memory. These results have been found across stimuli such as letters, words, Stroop, as well as symbols and are interpreted as support for the theory that older adults have a more inefficient inhibitory mechanism to prevent irrelevant (i.e., to-be-ignored) stimuli from entering working memory (Hasher, Stoltzfus, Zacks, & Rympa, 1991; Kane, Hasher, Stoltzfus, Zacks, & Connelly, 1994; May, Kane, & Hasher, 1995; McDowd & Oseas-Kreger, 1991; Stoltzfus, Hasher, Zacks, Ulivi, & Goldstein, 1993; Tipper, 1991).

Unlike the previously reported negative priming studies, additional research found that while older adults did not show a negative priming effect for meaning-related information, they did show a negative priming effect when the task was to identify the location of a target rather than the identity of a target (Connelly, Hasher, & Zacks, 1991; May, Kane, & Hasher, 1995). Connelly et al. (1991) suggested that two inhibitory

mechanisms might exist; one for meaning-related information and another for location-related information. Sullivan and Faust (1993), however, argued that Connelly and Hasher's methods did not provide robust effects that could reveal the operation of the inhibitory process in older adults. They suggested that the effects of an inefficient inhibitory process would likely depend on a number of factors including verbal ability and how similar the target and distracter factors are. They argue more research is needed before suggesting that there are different inhibitory mechanisms for different processes. Indeed, further research by McDowd and Filion (1995) found evidence that the inhibition of location is not totally preserved in older adults.

Recent research with younger adults, that assessed whether semantic access in priming studies is automatic, concluded that inhibition plays a large role in the negative priming effect. It has also proposed that the functions of activation and inhibition may be on a continuum that varies with task demands (Mari-Beffa et al., 2000).

Certainly, alternative theories to explain these effects have been offered by researchers opposing the inhibition explanation (Burke, 1997, McDowd, 1997, Neill, Valdes, 1992). It has been suggested that the power of the negative priming studies may be too weak to find the effects in older adults; however, attempts to improve power still resulted in no negative priming effect found in the older adult group (Kane, Hasher, Stoltzfus, Zacks, & Connelly, 1994.) Further, Neill and colleagues proposed that these effects are due to a backwards acting Episodic Retrieval in which the presentation of a stimulus causes the automatic retrieval of the most recent episode involving that stimulus. This would bring up the "ignore it" cue which conflicts with the current task requirement

which is to attend and respond (Neill & Valdes, 1992; Neill, Valdes, & Terry, 1995; Neill, Valdes, Terry, & Gorfein, 1992). Many authors, however, have found evidence contrary to this contention (Kane, May, Hasher, Rahhal & Stoltzfus, 1997; May et al., 1995; McDowd & Filion, 1995;). Zacks and Hasher (1994, 1997) addressed many of these concerns and document research from other paradigms that supported the Inhibition Theory. They further argue that while other theories may attempt to explain findings within paradigms, no other theory successfully reaches across paradigms to adequately explain these age differences in cognitive performance.

Although negative priming studies continue to be one of the primary methods for studying the inhibition mechanism of working memory, other paradigms have lent support for the reduced inhibition theory such as various Environmental Distractions, Directed Forgetting, Garden-Path, and the Fan Effect.

Environmental Distraction. Research studies involving visual search, auditory distraction, categorization, and Stroop tasks have been used to study differences between younger and older adults. Across these paradigms the older adults tend to be more negatively impacted by environmental distractions than younger adults (Kramer, Humphrey, Larish, Logan, & Strayer, 1994; May & Hasher, 1998; Zacks & Hasher, 1994;).

McDowd and Filion (1992) found that older adults habituated slower to auditory distraction than did younger adults. This could suggest older adults have less ability to inhibit non-relevant auditory sounds. However, a later study failed to show that auditory distraction affected performance on a visual task (Rouleau & Belleville, 1996).

Juola, Koshino, Warner, McMickell, and Peterson (2000) conducted a study using visual attention to fixed cues and abrupt onset cues that predicted the location of a target. They found that, even when the fixed cue provided higher predictability (75 %) than the abrupt onset cue (25 %), the older adults attended to the less valid onset cue thus impairing their perfor nce. The authors concluded that the older adults had reduced ability to inhibit task-irrelevant cues and to shift attention to task-relevant cues.

Research has been conducted using a method where participants read passages in which irrelevant, to-be-ignored text is interspersed with relevant, to-be-read text. The irrelevant and relevant texts were distinguished by the use of different fonts and font sizes. This research has found that, while both young and old age groups demonstrate slower reading rates in the presence of distracting words and phrases, the magnitude of these slowing effects was greater for older adults (Carlson, Hasher, Connelly, & Zacks, 1995; Connelly, Hasher, & Zacks, 1991; Zacks & Hasher, 1994). Further, it was found that while younger adults were equally affected by to-be-ignored words and phrases that were related and unrelated to the to-be-read text, older adults were more distracted by the to-be-ignored words and phrases that were related to the to-be-read text (Carlson et al., 1995; Connelly et al., 1991). When asked to read out-loud, older adults verbalize the to-be-ignored words and phrases more frequently and made more comprehension errors than younger adults (Dywan & Murphy, 1996). Therefore, these results further support the theory that older adults have a reduced ability to inhibit task-irrelevant stimuli in their environments and that their performance on various cognitive tasks suffers as a result

(Carlson et al., 1995; Connelly et al., 1991; Dywan & Murphy, 1996; Zacks & Hasher, 1994).

Directed Forgetting. In studies of directed forgetting, participants are asked to study a list of words or digits. Then they are told which words or digits are to-be-remembered and which are to-be-forgotten. A recall or recognition test follows to assess their memory for all the words or digits (Zacks, Radvansky, & Hasher 1996; Zacks, Radvansky, & Hasher 1993 as cited in Zacks & Hasher, 1994 and Zacks et al., 1996). These studies found that older adults remember fewer to-be-remembered words and recalled more to-be-forgotten words than younger adults (Zacks et al., 1993 as cited in Zacks & Hasher, 1994 and Zacks et al., 1996). The older adults were also slower to reject to-be-forgotten words on an immediate recognition test and recalled more to-be-forgotten words on a delayed recall test (Zacks et al., 1996).

Garden Path. The Garden Path Paradigm has also been used to study aging and inhibition. This paradigm uses either sentences or paragraphs with unexpected endings. In the sentence format, researchers provided participants with unfinished sentences with highly predictable endings (e.g., She ladled the soup in her _____.) Participants were then asked to predict the ending (e.g., bowl), then they were given the correct target ending. In the experimental items, participants were given a target ending other than the highly predictable ending (e.g., lap) and in the control items, the target ending is the highly predicted ending (e.g., bowl). They were told to remember the target endings for a memory test (Hartman & Hasher, 1991). Across studies, the general findings were that the younger adult group successfully suppressed the highly-predictable-but-disconfirmed

endings (e.g., bowl) and recalled the target endings (e.g., lap). The older adult group recalled both the disconfirmed endings and the target endings showing that they had failed to inhibit the no-longer-relevant-disconfirmed endings (Hartman & Dusek, 1994; Hartman & Hasher, 1991; Hasher, Quig, & May, 1997; May & Hasher, 1998; May, Zacks, Hasher, and Multhaup, 1999).

Hamm and Hasher (1992) conducted a similar study using longer passages with highly predictable interpretations early on, which later in the passage are disconfirmed. For example, one passage was about a man on safari shooting an animal. The implied meaning is that the animal was shot with a gun; however, by the end of the passage one learns that the animal was shot with a camera and that it was a photographic safari. They found that the disconfirmed meaning of the text is more disruptive for older adults than younger adults in that the older adults are less likely to abandon information when more relevant information later becomes available. At the end, the older adult group correctly identified the target meaning 88 % of the time, however, they also endorsed the incorrect, disconfirmed meaning 48 % of the time. The younger adult group, however, tended to drop the incorrect, disconfirmed meaning, and only report the correct, target meaning (Hamm & Hasher, 1992). Both the sentence and whole passage garden-path studies tend to support the theory that older adults are less able to inhibit irrelevant information from their working memory even when more accurate, relevant information is present.

Fan effect paradigm. Gerard, Zacks, Hasher, and Radvansky (1991) conducted a study that used Anderson's (1983) fan effect paradigm to investigate age-related changes in the effects of different levels of interference on retrieval from the long-term memory.

They proposed that in order for working memory to retrieve information rapidly and accurately, a newly encoded thought must be linked to relevant antecedents from one's preexisting knowledge. If working memory is slowed or less efficient--as would occur if an inefficient inhibitory mechanism allowed task-irrelevant information into working memory--the access to these needed antecedents would be jeopardized. Resulting linkages could be linked with the desired antecedent, the task-irrelevant information, or not established at all. This would impair retrieval of the newly "learned" information. Thus, they hypothesized that the speeded retrieval of even well known information will be less efficient in older adults as compared to younger adults. They used Anderson's (1983) fan effect paradigm that allowed for the analysis of timed retrieval processes with varying levels of interference.

In the fan effect paradigm, participants studied 18 facts that were presented in sentence form, with a "subject" and an "activity" in each sentence; for example, "The doctor took the car for a short test drive," and "The executive cut the apple pie in six pieces." In these examples, "doctor" and "executive" are subjects and "took the car for a short test drive" and "cut an apple in six pieces" are activities (see Table 1). The fan level indicates the number of times a subject or an activity was used in these fact sentences. Thus, the fan levels are created by using some of the subjects and some of the activities in multiple sentences and thereby increasing the interference at the more complex fan levels. An example of fan-level two would include the sentences, "The clerk arrived at the train station early," and "The clerk found a spot to sunbathe at the beach." Appendix B lists all 18 sentences and their respective fan levels. After learning each sentence to a specified

criterion level, the participants were tested in a speeded recognition test in which they had to decide if the sentence presented on the computer screen was one of the studied-fact sentences. For example, "The doctor took the car for a short test drive," and "The executive cut the apple pie in six pieces," are fact sentences (i.e., one previously studied) while "The doctor cut the apple pie in six pieces," is a foil sentence (i.e., one not previously studied). Both probe-type sentences (i.e., fact and foil) included sentences at each of the fan levels. A fan effect is operationally defined as an increase in reaction time or error rate as the fan level increases from fan level 1-1 to fan level 2-2 to fan level 3-3. Fan level 1-1 is made up of sentences in which the subject and activity are used only once in all of the sentences. Fan level 2-2 is made up of sentences in which both the subject and activity are used in two sentences. Last, in fan level 3-3 the subjects and activities are used in a total of three sentences. As you will see in Appendix B, there are also fan levels 2-3 and 3-2 which consist of sentences in which the subject was used in two sentences and the activity was used in three sentences and vice versa. However, those fan levels were not used in statistical analyses. Gerard et al. (1991) found that, although both the younger and older adults demonstrated the fan effect in that they had longer reaction times and higher error rates at the more complex fan levels, the magnitude of these differences between fan levels were greater for the older adults than the younger adults resulting in a significant Age-group by Fan interaction. This interaction may be explained within Hasher and Zacks' (1988) theoretical framework in that during encoding the older adults' deficient inhibitory mechanism allows more irrelevant information to enter the working memory; thus allowing the older adults to form erroneous links

between the newly encoded information and the irrelevant thoughts. During recall the older adults will have difficulty inhibiting the recall of these erroneous links which then interfere with the task-relevant links.

Table 1. Nine Subjects and Nine Activities Used to Create the Fact Sentences.

Subjects	**Activities**
Executive	cut the apple into six pieces
Writer	put down a two-month security deposit
Pharmacist	took the car for a short test drive
Doctor	nervously watched the tightrope walker
Minister	ran at least four miles a day
Teacher	found a spot to sunbathe at the beach
Judge	decided to play chess with a friend
Anchorman	got change from the laundry attendant
Clerk	arrived at the train station early

Since 1991, several additional studies have used the fan effect paradigm to study how information is organized in memory. Anderson (1983) and Anderson and Reder (1999a, 1999b) argued that information, such as the stimuli found in the fan effect are organized in memory as a set of nodes and links that make up a network. Each concept is represented as node and each association between concepts is represented by a link. They argued that fan effects can be explained by assigning different weights given to various concepts in long-term memory (Anderson & Reder, 1999a, 1999b).

Radvansky and colleagues offer a different organization. They argue that when a fact is learned about a situation, a representation is made in the memory (as did Anderson); however, if subsequent information is relevant to the same situation, it is integrated into the same representation (Radvansky, 1999b, 1999c; Radvansky, Spieler, &

Zacks, 1993; Radvansky, Wyer, Curiel, & Lutz, 1997; Radvansky & Zacks, 1991; Radvansky, Zacks, & Hasher, 1996; Zwaan & Radvansky, 1998). Thus, rather than "The ceiling fan was in the hotel," and "The waste basket was in the hotel," being stored as separate nodes, they would be integrated into one situation and stored as a unit (Radvansky & Zacks, 1991). Many studies have, in fact, supported this hypothesis by showing that sentences which can be integrated into one representation are recalled faster than sentences which cannot be integrated (Radvansky et al., 1993; Radvansky et al., 1997; Radvansky & Zacks, 1991). Further research has shown that this integration is more apt to take place when information is easily organized by locations but less apt to take place when easily organized around a person (Radvansky et al., 1993). For more information on situation models in memory see Zwaan and Radvansky's (1998) review.

Radvansky, Zacks, & Hasher (1996) conducted a fan effect study using sentences that could be easily integrated (e.g., "The ceiling fan was in the hotel," and "The waste basket was in the hotel") and sentences which could not be easily integrated, (e.g., "The cola machine was in the laundry mat," and "The cola machine was in the court house") and that had varying levels of fan. Results found that when sentences could be integrated both younger and older adults demonstrated no fan effect in that their reaction times and error rates did not increase as the fan level difficulty increased. However, when the sentences could not be easily integrated, the older adults demonstrated a fan effect as seen in Gerard et al's. (1991) experiment (Radvansky et al., 1996; Radvansky, 1999a).

While this fan effect research has advanced the knowledge of how information may be integrated together in memory and mediate some fan effects in older adults, my

primary interest is in Gerard et al. (1991) and Radvansky et al. (1996) findings that when not readily integrated, older adults demonstrate a greater magnitude of fan effect than younger adults.

Effects of Mood and Aging on Long Term Memory

Recently Gunther, Ferraro, and Kirchner (1996) combined the fan effect and induced-mood paradigms in order to consider how a younger adult's emotional mood state would affect the retrieval of information from long-term memory. They hypothesized that, if strong emotions (e.g., sad and happy) could weaken the inhibitory mechanism's ability to screen out task-irrelevant thoughts, participants in the sad and happy mood groups would be more likely to experience interference with task relevant thoughts. Thus, they would have longer reaction times than subjects induced into a neutral mood. Their hypothesis was supported in the sad condition in that the younger adults had longer reaction times and higher error rates at the more complex fan levels and that the magnitude of these differences was greater for the sad-induced-mood group than for the neutral-induced-mood group, thus obtaining a Mood-group by Fan interaction. These results support the findings that mood states affect the retrieval of information embedded in unrelated sentences from long-term memory (Ellis et al., 1985).

The consideration of these two similar studies, Gerard et al. (1991) and Gunther et al. (1996), leads to an interesting question: If older adults tend to have deficient inhibitory mechanisms that allow irrelevant information to enter the working memory during encoding and retrieval, how will the additional effect of an induced-mood state affect their encoding and retrieval? Although a few studies have produced induced moods in

older adults by autobiographical memories (Levenson, Carstensen, Friesen, & Ekman, 1991; Malatesta, Izard, Culver, & Nicolich, 1987) and by a self-referencing statement procedure accompanied by music (Fox, Knight, & Zelinski, 1998), to my knowledge, no experimental research has used an induced-mood paradigm to investigate older adults' cognitive performance. Deptula, Singh, and Pomara (1993) compared the correlation between pre-existing negative mood states and memory in both younger and older adult participants. They found that healthy older adults demonstrated significant negative correlation between self-rated mood states (e.g., anxiety, depression, withdrawal) and performance on eight of nine verbal recall tasks. Similar results were not present in the younger adults. The authors concluded that age modulates the relationship of emotional states and memory functioning, and--even in the absence of clinical psychopathology--it is feasible that negative mood states may impede the memory operation of older adults (Deptula et al., 1993). Lichtenberg, Ross, Millis, and Manning (1995) conducted a cross-validation study in which older adults' scores on the Geriatric Depression Scale (GDS) were found to be significant predictors of Dementia Rating Scale and Logical Memory scores. To be more specific, they found that increased depression in older adults predicted decreased cognitive ability. The authors concluded that this provides persuasive evidence that depression and cognition are significantly related. Another study found, in a sample of older adults, that high Beck Depression Inventory (BDI) scores indicative of dysphoria were clearly associated with significantly lower performance on measures of cognitive ability such as verbal memory, spatial reasoning, vocabulary, and more (Rabbitt, Donlan, Watson, McInnes, & Bent, 1995). Further,

neuroimaging research has found that the brains of depressed older adults show more pathologic changes than the brains of nondepressed older adults (Kertesz, Polk, & Carr, 1990; Morris & Rapoport, 1990). Last, Smith (1997) wrote a complicated theoretical and statistical account for how various emotional states may affect one's motivation, goals, energy, interpretation of situations and plan of attack in problem solving. For a simplified example, individuals who are depressed in mood may exhibit biases toward retrieving specific negative memories, and although they have adequate ability to access memory, the range of what is accessed is limited. Whereas, he argued, a suicidal individual may demonstrate good range but have a strong bias toward general patterns of events rather than specific memories (Smith, 1997).

Over the last few decades, researchers have investigated differences in the emotional experiences of younger, middle, and older adults. Studies have found that older adults reported less intense and less frequent emotional experiences than did younger or middle-aged adults (Barrick, Hutchinson, & Deckers, 1989; Lawton, Kleban, & Dean, 1993; Lawton, Kleban, Rajagopal, & Dean, 1992); older adults described emotions more dynamically and flexibly across time and context as well as with terms more oriented toward inner senses (Gross, Carstensen, Tsai, Skorpen, Hsu, 1997; Lawton, et al., 1992); older couples demonstrated less emotion during conversations about a conflict in the relationship than did the younger and middle-aged groups (Carstensen, Gottman, & Levenson, 1995); and older adults reported modulating emotions more often and reported more control over emotions than younger adults (Carstensen & Turk-Charles, 1994; Fredrickson & Carstensen, 1990; Labouvie-Vief & DeVoe, 1991;

Labouvie-Vief, DeVoe, and Bulka, 1989; Lawton et al., 1992; Levine & Bluck, 1997). Gross et al. (1997) found that European Americans (Caucasian) reported more emotional control while European and African Americans reported a decrease in the strength of impulses, a decrease in the experience of anger, sadness, and fear, and an increase in the experience of happiness (Gross et al., 1997). Last, older adults reported that their emotional experience was more distinguished by positive emotions than by negative emotions (Dougherty & Riggins, 1995, as cited in Dougherty, Abe, & Izard, 1996).

Despite findings that older adults reported less emotional experience and reported that their emotions were less intense than younger adults, research has also found that emotions become more salient or prominent as people age (Carstensen, 1992; Carstensen & Turk-Charles, 1994; Dougherty, Abe, & Izard, 1996; Labouvie-Vief et al., 1989; Lawton et al., 1993; Levine & Bluck, 1997). This may be because of changing goals and how they relate to the interpretation of situations and emotions (Blanchard-Fields, 1996; Carstensen, 1992; Sansone & Berg, 1993). Older adult groups reported more interpersonal goals than younger groups including intimacy and generativity (Sansone & Berg, 1993). With changing goals, come different coping strategies. Older adults reported using more emotion-regulating strategies and dialectical thinking than younger adults (Blanchard-Field, 1996; Kramer, 1990).

Thus, research has shown that older adults report experiencing less emotions even while the prominence of emotions in their decision making increases. It followed then that some researchers have questioned how accurate the recalled memories of past emotions are across age groups. Cohen, Conway, and Maylor (1994) recorded British

participants' emotional accounts of Margaret Thatcher's resignation two weeks after the event. Then, 11 months later, they asked the same participants to recall their emotional reaction to her announcement. They found that the younger adults' accounts were more accurate and detailed than the older adults'. A similar study in the U.S. polled Ross Perot's supporters about their emotional reaction after he dropped out of the presidential election and re-polled them four months later. They found initially that there were no age-group differences in the frequency and intensity of sadness, anger, and hope reported by participants. After four months, older adults recalled sadness as being less intense than they had originally reported. However, there were no differences in the other two emotions (Levine & Bluck, 1997). The authors suggested that recalling past events and past emotion may require cognitive processing skills which are vulnerable to the effects of aging (Craik, 1994; Levine & Bluck, 1997). Further, older adults are more likely than younger and middle-aged adults to state that they try to avoid emotion (Lawton et al., 1992) and that people should try to repress their emotion (Levine & Bluck, 1997; Malatesta & Kanok, 1984). These attitudes may influence how they recall past events and emotions.

Research in physiological reactions of the autonomic nervous system (ANS) to different emotions found that, although the magnitude of older adults' ANS reaction was smaller than that of younger adults, the pattern of ANS activity for each emotion tested was the same across age groups (Levenson et al., 1991). Buck (1984) found that individuals who were more overtly expressive show more dampened ANS reactivity.

Therefore, if emotions become more salient as one ages, the smaller magnitude of ANS activity during emotion might be expected.

These results have shown differences in how older and younger adults are affected physiologically by emotion and how they remember and report emotion. Therefore, the study of induced-mood effects in older adults may serve as a stepping stone toward understanding how emotion affects the cognitive abilities of older adults.

The Present Study

In the present study the impact of age on the effects of salient induced-mood states and the retrieval of information from long-term memory was studied using a combination of the two studies previously discussed, Gerard et al. (1991) and Gunther et al. (1996). Gerard et al. (1991) found that both younger and older participants demonstrated increased reaction times and error rates as fan level complexity increased. In Gerard et al. (1991) there was a significant Age-group by Fan level interaction in which the fan effect was greater in the older than in the younger adults across increasing fan sizes. The authors theorized that the older adults inhibited less irrelevant information while learning the target facts and allowed the irrelevant information to remain in the working memory for longer periods of time than the younger adults. Therefore, the older adults would likely have links in the mental lexicon between the target facts and the irrelevant thoughts. During the speeded recognition phase, the older adults would again have difficulty inhibiting the recall of these irrelevant associations.

Further, Gunther et al. (1996) found younger adult participants induced with sad mood states had reaction times and error rates greater than the neutral induced-mood

group resulting in a Mood-group by Fan level interaction. This result suggests that the induction of sad mood states results in reduced inhibition of irrelevant information. Therefore, it is predicted that in the present study the older adults will have greater reaction times and error rates than the younger adults with increasing differences occurring as the fan level increases; thus replicating Gerard et al's. (1991) Age-group by Fan interaction. Moreover, it is predicted that young (and eventually old) participants induced with a sad mood state will have greater reaction times and error rates than the participants induced with a neutral mood state with increasing differences occurring as the fan level increases, thus replicating Gunther et al's. (1996) Mood-group by Fan interaction. Last, it was predicted that there would be an Age-group by Mood-group by Fan level three-way interaction in that the magnitude of the differences between the older-sad group and the older-neutral group would be greater than the differences between the younger-sad group and the younger-neutral group.

Using the Anderson (1983) fan effect paradigm, as used in Gerard et al. (1991) and Gunther et al. (1996), the present study attempted to determine the effect of induced mood on the semantic memory abilities of older and younger adults. Specifically, participants (both younger and older adults) were randomly assigned into one of two mood states (sad, neutral). The participants completed a series of screening measures outlined in Chapter II and then participated in the fan effect task. Comparisons were conducted between induced-mood groups within age groups and across age groups.

Clinical Implications

Epidemiological studies have found that the 6-month prevalence of major depression among those 65 or older is approximately 2% using the DSM-III-R criteria for Major Depressive Disorder and 1.5% for Dysthymic Disorder (Scogin, 1994). This prevalence rate was the lowest of any age group. Despite these findings, as many as 20% of the elderly may have clinically significant depressive symptoms which fail to meet the diagnostic criteria (Scogin, 1994). This suggests that further understanding of depression in older adults in needed in order to properly diagnose and treat it.

One avenue, previously studied, to understand depression in the elderly is to examine the effect of depression on cognition. Popular stereotypes suggest that as people age their cognitive abilities, including memory ability, decline. Several authors have suggested that it is important to develop an understanding of how cognitive processes function in healthy older adults and what factors, including depression, may play a role in any cognitive declines (Balota & Ferraro, 1996; Deptula, Singh, & Pomara, 1993; Ferraro, 1995; Gerard et al., 1991; Hartlage, Alloy, Vàzquez, & Dykman, 1993; Kitzan, Ferraro, Petros, & Ludorf, 1999; Oscar-Berman, Hancock, Midworf, Hutner. & Weber, 1990; Sarason, 1984; Sarason et al., 1996; Sarason & Stroops, 1978; Seibert & Ellis, 1991b; Tainturier, Tremblay, & Lecours, 1989). Further, it has long been believed that depression may have adverse cognitive effects so severe that it mimics organic dementia, thus receiving the title "pseudodementia" (Thompson, 1986). Indeed, some researchers have found relationships between depression and cognitive declines including spatial recognition memory, matching to sample, spatial span, spatial working memory and

planning (Elliott, Shakian, McKay, & Herrod, 1996); visual memory, nonverbal intelligence, information-processing speed, and executive skills (Boone, Lesser, Miller & Wohl, 1995); visuospatial recognition memory, attentional shifting, processing and motor speed, and planning (Beats, Sahakian, & Levy, 1996); language function, memory, attention, and behavioral regulation (Brown, Scott, Bench, & Dolan, 1994); mental status, memory, and psychomotor speed (La Rue, Swan, & Carmelli, 1995); as well as attention, memory, and visuospatial functions (Bulbena & Berrios, 1993). Boone, Lesser, Miller, & Wohl (1994) found that cognitive declines (e.g., nonverbal memory, word generation, and categorization) are associated with depression; however, they noted that after the age of 70 the differences between the depressed and the controls diminished to nonsignificant levels. La Rue, Swan, and Carmelli (1995) also found evidence that there may be a link between positive affect and the maintenance of cognitive effectiveness. On the other hand, others report no--or very minimal--effects of depression on various cognitive processes (Thompson, 1986) including mental status (Poon, 1992), as well as verbal intelligence, language, verbal memory, and constructional ability (Boone et al., 1995). Poon (1992) and Bieliauskas (1993) contend that the effects of depression on cognitive functions are overrated and greatly affected by sampling and task variables. They argue that the concept of pseudodementia should be abandoned.

Therefore, it appears that the empirical evidence on the implications of negative mood on cognitive functioning in the elderly is, at the very least, inconclusive. Yet, understanding the implications of mood on the cognitive functioning of older adults is imperative in the conceptualization of "normal vs. aberrant" cognitive functioning in

older age. If we gain a clearer picture of normal aging declines in cognitive function as compared to those related to mood, we may then gain a better understanding of and perhaps eventually improve the differential diagnosis of dementia-related disorders and affective disorders. The induced-mood paradigm, which has long been used with younger adults, offers a different approach to study the temporal effects of intense mood states on cognitive functioning.

Chapter II

METHOD

Subjects

A total of 202 adults participated. Twenty-seven older adult males and 46 older adult females participated, ranging in age from 55 to 87. They were drawn from a subject pool of local, community-dwelling older adults (some retired faculty) who responded to advertising and were paid $10 for their time.

Thirty-nine younger adult males and 90 younger adult females also participated in the study. The younger adults' ages ranged from 18 to 35. They were recruited from the undergraduate psychology student population at the University of North Dakota, and received extra credit for their participation. Two younger adults' data (one male, one female) were excluded from analyses because their data from the computer task were missing. A second young adult male's data were not used because the research assistant divided the testing up over two days, thus failing to follow the appropriate testing protocol. Thus 37 younger adult males' and 89 younger adult females' data were used in the analyses.

Materials

All subjects was administered the following screening measures before the onset of the memory task:

1. Consent form

2. A background questionnaire that assesses self-rated health, age, sex, education level, and number and type of medications used.
3. The vocabulary subtest of the Weschler Adult Intelligence Scale-Third Edition (WAIS-III).
4. The Nelson-Denny Reading Rate Subtest.
5. The Geriatric Depression Scale-Short Form (GDS-SF).
6. The State-Trait Anxiety Inventory (STAI).

Please refer to Appendix A, which includes copies of all of these measures (1-6).

The 15-item GDS-SF was used as a screening tool for probable depression in both younger and older adults. Depression has been shown to negatively affect cognitive performance (Ellis et al., 1985; Ellis et al., 1984; Hartlage et al., 1993; Ingram et al., 1987; Leight & Ellis, 1981; Lubin, 1965; Natale & Hantas, 1982; Seibert & Ellis, 1991b). Depressed individuals tend to think more negatively and demonstrate slow performance on cognitive tasks. Therefore, it is relevant to control for this effect across subject groups so as not to confound the induced-mood states. The GDS-SF uses a yes-and-no format and was developed to exclude items that are correlated with normal aging and age-related diseases. Brink et al. (1982) found that this new instrument was slightly superior to the Hamilton (1960, 1967) and Zung (1975) depression scales in distinguishing between depressed older adults and control older adults. The GDS is also highly correlated (rs = .82) with both of these two scales. Brink et al. recommended that the GDS be used for initial screening for depression in older medical patients. In a study of older psychiatric inpatients, the GDS and the Beck Depression Inventory (BDI, Beck, Ward, Mendelsen,

Mock, & Erbaugh, 1961; Beck, 1978) were significantly correlated (r = .73). The GDS was determined to be a superior discriminator between older depressed and nondepressed groups than the BDI (Hyer & Blount, 1984).

Many studies have supported the validity of the GDS-SF for use with younger adults as well. Ferraro and Chelminski (1996) found that scores on the GDS-SF and the BDI were highly correlated (r =.84) when assessing probable depression in college students, suggesting that the GDS-SF is a valid and reliable depression screening device. Other researchers have, likewise, determined that the GDS-SF is adequately reliable to use in research with a younger population especially when the younger adults are serving as a comparison group for older adults (Brannan, Pignatiello, & Camp, 1986; Brink & Niemeyer, 1992; Rule, Harvey, & Dobbs, 1989).

In addition to depression having negative effects on cognitive performance, several studies have shown that anxious mood states are related to reduced inhibition of irrelevant information from working memory (Ingram et al., 1987; Sarason, 1984; Sarason, Sarason, Keefe, Hayes, & Sherin, 1986; Sarason & Stroops, 1978; Seibert & Ellis, 1991b). Therefore, the State-Trait Anxiety Inventory (STAI) was used as a screening measure to control for any effects of anxiety (Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983). The STAI consists of two self-report questionnaires that assess for levels of current situational (state) anxiety or long-term anxious traits in one's personality (trait). Scores range from 20 to 80 on each form. No cut-off scores are given, however, higher scores indicate higher levels of anxiety (Spielberger et al., 1983).

Labouvie-Vief, De Voe, and Bulka (1989) found that in addition to ego development, verbal ability was correlated with descriptions of emotions as well as the modulation of emotion. This suggests that verbal ability may be an important covariate in understanding participants' emotions. Further, vocabulary ability specifically has been repeatedly associated with performance on a myriad of cognitive tasks in younger and older adults (Balota & Ferraro, 1996; Kitzan et al., 1999; Tainturier, Tremblay, & Lecours, 1992). Therefore, the two measures of verbal ability were included as a means to measure verbal ability. First, the WAIS-III vocabulary subtest (Wechsler, 1997) was used to assess vocabulary ability. Second, the Nelson-Denny Reading Rate Subtest (Nelson & Denny, 1973) was used to obtain a gross measure of reading speed in words per minute. This measure was critical because participants read and responded to sentences displayed on the computer. The reaction time measurements gathered during the speeded recognition phase would reflect the participants' reading rates as well as memory of the target facts. Therefore, reading rate was used as a covariate in an analysis of covariance of the reaction time data to compensate for any poor performance due to poor reading rate rather than poor interference in working memory.

Acquisition Phase

The memory task was based on the Anderson (1983) fan effect paradigm and materials used were taken from Gerard et al. (1991). All participants were instructed to learn a set of 18 facts to a specific criterion level. This procedure involved reading and learning a set of facts in the form of "*The* [type of professional] *performed* [an activity]." For example, "The executive cut an apple into six pieces." Nine characters of different

professions (subjects) and nine activities were used to create the 18 sentences. Six of these sentences are at the 3-3 fan level and 3 sentences at each of the 1-1, 2-2, 3-2 and 2-3 fan levels. This configuration was produced by placing specific subjects and activities in a number of different sentences (Gerard et al., 1991). For example, the characters and activities in the 2-2 fan level each appear in two different sentences. (Refer to Appendix B in which these fact sentences are listed and grouped according to fan level. Reviewing this list will assist you in better understanding the fan levels.) The target or fact sentences were presented on note cards held by the subjects for 15 seconds during which they were told to memorize the sentence. After viewing each sentence in the 18-sentence set, an oral recall test was administered questioning the participants about each character and each activity (e.g., What did the executive do?). Based on the fan level the answer to each question may include one, two, or three responses. If the participant made an error, he or she was told the correct answer and the learning phase was repeated until they successfully answered all oral recall questions two consecutive times. If a participant failed to reach criterion within 40 minutes, he or she was reminded that the experiment could end at any time. If the participant was willing to continue, he or she continued with the learning phase until the facts were to criterion, the participant decided to stop the experiment, or 75 minutes expired. In the latter two cases, the participants were debriefed as if this was the natural end of the study, thanked for their time, and either paid $10 dollars (older adults) or given two hours of extra credit (younger adults).

Mood Induction

Participant numbers (e.g., young subject No. 1, young subject No. 2, etc.) were randomly assigned to a sad or neutral mood state group prior to the participants entering the study. This was done by each participant number being randomly assigned a mood group based on the roll of a die. If the die's number came up even the participant number was assigned to the sad group and if the die's number was odd the participant number was assigned to the neutral group. Those participants completing the learning phase were induced into this preassigned mood-group. Seibert and Ellis's (1991b) mood-induction procedures were used to induce the temporary sad and neutral mood states. These self-referencing, mood-induction procedures required the participants to read through a set of 24 statements each printed on individual note cards. Seibert and Ellis's results as well as the results from Gunther et al. (1996) indicated that these procedures successfully induced the target mood in the majority of younger adult participants. Similarly, their neutral mood induction procedure had been successful in inducing or maintaining a neutral mood in participants. Seibert and Ellis's sad mood-induction procedures were altered slightly so the sentences would be inclusive of older adults. Several of the original sentences were written specifically for college students and would not be applicable to older adults. For example, "My parents don't know who I am," was changed to "My family doesn't know who I am." Participants were told to try hard to feel the mood described on each card. This procedure required participants to read and experience the mood of each card for 20-seconds. At the end of the study, just prior to debriefing, the participants went through the happy-mood induction (Seibert & Ellis, 1991a) to counter any negative

effects of the mood inductions. Two statements from Seibert and Ellis's original happy list were dropped from this procedure so it was applicable to older adults. See Appendix C for a complete list of the mood-induction statements used.

Lubin's Depression Adjective Checklist (DACL) - Form A was used to assess the success of both the sad and neutral mood inductions. After the completion of the computer recognition test the participants completed the DACL - Form B to reassess their mood to determine if their mood stayed the same throughout the duration of the computer task. Each DACL form is made up of 22 sad adjectives and 10 happy adjectives. The score is made up of the number of sad adjectives chosen by the participant plus the happy adjectives not chosen, thus the higher the score the sadder the mood and the lower the score the happier the mood (Lubin, 1965).

Computer Recognition Task Stimuli

The stimuli for the computer recognition task included a total of 18 sentences (9 previously-studied fact sentences and 9 unstudied foil sentences). Each was repeatedly presented six times as in Gerard et al. (1991) and Gunther et al., (1996). Each of these 108 (18 x 6) randomly distributed stimuli were displayed as an entire sentence one at a time on a computer screen and remained on the screen until the participant responded. The participants were asked to judge as quickly and accurately as possible whether the sentence comes from the studied set of facts or if it is a foil fact and press "1" or "0" respectively, to indicate their choice. They used the index fingers of each hand to make these decisions. When a participant made an error, an error message was displayed on the computer monitor and a tone sounded.

Apparatus and Procedure

Prior to participants entering the study, all participant numbers (e.g., older subject No. 1, older subject No. 2, etc.) were randomly assigned to a mood group by rolling a die. If the die toss resulted in an odd number the participant number was assigned to the sad mood induction and even numbered rolls to the neutral mood induction.

All participants first completed the consent form, background questionnaire, WAIS-III Vocabulary subtest, Nelson-Denny Reading Rate subtest, GDS-SF, and the STAI (see Appendix A). The learning phase of the memory task was then conducted in which the participants learned the target facts to the criterion level, as described above. The number of trials required to learn the facts to criterion was recorded. Once criterion was reached, the mood-induction phase began using the self-referencing mood-induction procedure described above and the administration of the DACL - Form A. Subsequently, the speeded recognition phase of the memory task was presented on a 386 SX IBM-compatible computer using Micro Experimental Laboratory (MEL) software that collected reaction times and error rates (Schneider, 1988). Following the recognition phase, the participants completed the DACL - Form B (patterned after Form A and scored the same way) so that the intensity of the induced-mood state could be reevaluated (Gunther et al., 1996). Finally, the participants were administered the happy sentences from Seibert and Ellis's (1991b) mood induction procedure to counterbalance any negative feelings still present. The participants were then debriefed and any questions they may have had were answered.

Chapter III

RESULTS

Demographic Characteristics of All Participants by Age-Groups

As described above, 73 older adults participated in the study. The mean age of the older adults (collapsed across gender) was 69.63 years (SD = 6.62) and they ranged in age from 55 to 87. Based on self-report, the mean health of these participants was above average (M = 2.30, SD = 0.95) and they took an average of 1.97 prescription medications (SD = 2.39) with a range from zero to 11. The groups' mean on the GDS-SF was 1.48 (SD = 2.50) with a range of zero to 11. The older adults' mean on the State Anxiety Scale was 31.74 (SD = 10.75) and their mean on the Trait Anxiety Scale was 32.15 (SD = 10.61). The mean years of education completed in the older adult group was equivalent to 3 years of college (15.33 years total, SD = 2.81) and the median was 4 years of college (16 years total). The range of their years of education spans from 10 to 20 years. Their mean Nelson-Denny reading rate was 222.11 words per minute (SD = 60.12). Last, the older adults' mean WAIS-III Vocabulary raw and age-scaled scores were 43.77 (SD = 10.17) and 10.89 (SD = 2.53) respectively.

As described above 126 younger adults participated in the study. The mean age of the younger adults (collapsed across gender) was 21.53 years (SD = 3.53) and they ranged in age from 18 to 35. Based on self-report the mean health of these participants was above average (M = 2.25, SD = 0.79) and they took an average of 0.59 prescription

medications (SD = 1.59) with a range from zero to 15. The groups' mean on the GDS-SF was 1.33 (SD = 2.06) with a range of zero to 15. The younger adults' mean on the State Anxiety Scale was 31.84 (SD = 8.49) and their mean on the Trait Anxiety Scale was 34.80 (SD = 9.08). The mean of the level of education completed in the younger adult group was equivalent to one and a half years of college (13.54 years, SD = 1.14) and their median was 13.50 years. The range of their years of education spanned from 12 years to 17 years. Their mean Nelson-Denny reading rate was 229.11 words per minute (SD = 70.70). Last, the younger adults' mean WAIS-III Vocabulary raw and age-scaled scores were 40.29 (SD = 8.20) and 10.83 (SD =1.95) respectively.

Several simple ANOVAs were conducted comparing the demographic and questionnaire data of these two groups. The analyses showed significant differences in the participants' mean scores for education level (older adults = 15.33, younger adults = 13.54, $F(1, 195) = 33.09$, $p < 0.01$), Number of Prescription Medications (older adults = 1.97, younger adults = 0.59, $F(1,194) = 25.31$, $p < 0.01$), and the WAIS-III Vocabulary raw scores (older adults = 43.77, younger adults = 40.29, $F(1, 195) = 17.02$, $p < 0.01$).

Demographic Characteristics of Completed Participants by Age-Groups

Many participants quit or were unable to finish the study to completion. This occurred in all cases (except two) during the learning phase. Either the participant had decided to cease trying to learn the target facts to the criterion level prior to the time limit or the time limit of 75 minutes elapsed without the participant successfully memorizing the target facts to criterion level. Two participants (one older, one younger) appear to have left the study before the onset of the learning phase because they were feeling ill. Of

the 199 participants described in the results above, only 127 participants were able to complete the study (11 older adult males, 19 older adult females, 23 younger adult males, and 74 younger adult females). Despite these small cell sizes, data collection was stopped due to concern that the long-term memory task was unduly stressful for the older adult participants. This concern was supported via e-mail communication with Dr. Rose Zacks and Dr. Gabrielle Radvansky who reported no longer using this paradigm after witnessing distress at the difficulty of the task among older adults (R. T. Zacks, personal communication, September 22, 1999; G. A. Radvansky, personal communication, September 29, 1999).

Several simple ANOVAs were conducted comparing the demographic and questionnaire data of all of the participants using completion status and age-group as factors. Two analyses found significant differences between those participants who finished and those who did not finish: The WAIS-III Vocabulary raw scores (completed = 42.94, noncompleted = 39.13, $F(1, 195) = 17.64$, $p < 0.01$); the age-scaled WAIS-III Vocabulary scores (completed = 11.26, noncompleted = 10.13, $F(1, 195) = 15.59$, $p < 0.01$). Last, the number of trials completed during the learning phase demonstrated an interaction between age-group and completion status (completed older adults = 6.17, noncompleted older adults = 6.05, completed younger adults = 5.32, noncompleted younger adults = 6.79, $F(1, 191) = 4.53$, $p < 0.05$). The remaining demographic and questionnaire data were also analyzed using simple ANOVAs and demonstrated no differences across age-groups or completion status. This information appears in Table 2 located in Appendix D.

The remaining analyses conducted relate only to the participants who completed the study (see Table 3 for cell sizes).

Table 3

Number of Participants Per Cell by Age-group, Mood-group, and Gender

Age-group	Gender: Male		Gender: Female	
	Neutral Mood	Sad Mood	Neutral Mood	Sad Mood
Older Adults	5	6	13	6
Younger Adults	9	14	22	52

The mean age of the 30 older adults who completed the study (collapsed across gender) was 68.20 years (SD = 7.34) and they ranged in age from 55 to 87. The mean self-reported health of these participants was above average (M = 2.17, SD = 0.95), and they took an average of 1.97 prescription medications (SD = 2.28) with a range from zero to nine. The groups' mean on the GDS-SF was 0.87 (SD = 1.20) with a range of zero to five. The older adults' mean on the State Anxiety Scale was 30.77 (SD = 10.85) and their mean on the Trait Anxiety Scale was 29.60 (SD = 7.14). The older adults' mean years of education was equivalent to 3+ years of college (15.33 years total, SD = 2.59) and the median was 4 years of college (16 years total). The range of their years of education spans from 12 to 20 years. Their mean Nelson-Denny reading rate was 232.63 words per minute (SD = 63.30). Last, the older adults' mean WAIS-III Vocabulary raw and age-scaled scores were 46.80 (SD = 9.73) and 11.63 (SD = 2.65) respectively.

The mean age of the 97 younger adults who completed the study (collapsed across gender) was 21.55 years (SD = 3.71) and they ranged in age from 18 to 35. Based on self-report, the mean health of these participants was above average (M = 2.25, SD = 0.80) and they took an average of 0.72 prescription medications (SD = 1.78) with a range from zero to 15. The groups' mean on the GDS-SF was 1.38 (SD = 2.23) with a range of zero to 15. The younger adults' mean on the State Anxiety Scale was 32.08 (SD = 8.97) and their mean on the Trait Anxiety Scale was 34.91 (SD = 9.09). The mean years of education completed in the younger adult group was equivalent to one and a half years of college (13.53 years total, SD = 1.15) and their median was 13.0 years completed. The range of their years of education span from 12 years to 17 years. Their mean Nelson-Denny reading rate was 232.89 words per minute (SD = 73.33). Last, the younger adults mean WAIS-III Vocabulary raw and age-scaled scores were 41.75 (SD = 7.64) and 11.14 (SD = 1.84) respectively.

Again, several simple ANOVAs were conducted comparing the demographic and questionnaire data of the younger-completed and older-completed groups using age-group and mood-group as factors. Several analyses showed significant main effects of age-group in the participants' mean scores for education level (older adults = 15.33, younger adults = 13.53, $F(1, 123) = 25.79$, $p < 0.01$), number of prescription medications (older adults = 1.97, younger adults = 0.72, $F(1,123) = 10.95$, $p < 0.01$), and Trait Anxiety Scale (older adults = 29.60, younger adults = 34.91, $F(1,123) = 7.04$, $p < 0.01$). There were no main effects of mood-group but there were significant interactions between age-group and mood-group on the factors of the raw WAIS-III Vocabulary raw scores (older-neutral

adults = 44.94, older-sad = 49.58, younger-neutral = 43.81, younger-sad = 40.79, $F(1,123) = 4.84$, $p < 0.05$), and the age-scaled WAIS-III Vocabulary scores (older-neutral adults = 11.17, older-sad = 12.33, younger-neutral = 11.71, younger-sad = 10.88, $F(1,123) = 5.24$, $p < 0.05$). Remaining demographic and questionnaire data were also analyzed using simple ANOVAs and demonstrated no significant differences across groups or mood. This information appears in Table 4 located in Appendix D.

Correlations

Older and younger adult groups combined. Pearson Product-Moment Correlations were calculated between all participant variables to investigate any relationships between variables. On the combined data from the older and younger adults who completed the study, significant correlations were found between GDS-SF and DACL-A, $r = 0.32$, $p < 0.01$; GDS-SF and DACL-B, $r = 0.41$, $p < 0.01$; STAI state anxiety and DACL-A, $r = 0.39$, $p < 0.01$; STAI state anxiety and DACL-B, $r = 0.39$, $p < 0.01$; STAI trait anxiety and DACL-A, $r = 0.40$, $p < 0.01$; and the STAI trait anxiety and DACL-B, $r = 0.48$, $p < 0.01$. Due to these correlations, ANCOVAs were conducted regarding age-group and mood-group differences on the DACL-A and B results using GDS-SF, STAI state anxiety, and STAI trait anxiety scores as covariates. These ANCOVAs are reported in a later section of this chapter.

Further correlations were found in the combined older and younger adult data between gender and reaction times on several levels of fan (i.e., levels 1-1, 2-2, 3-3) and probe type (i.e., fact, foil): fact-fan level 2-2, $r = -0.23$, $p < 0.05$; foil-fan level 1-1, $r = -0.18$, $p < 0.05$; foil-fan level 2-2, $r = -0.21$, $p < 0.05$; the mean of all fact (collapsed across

fan level), $r = -0.19$, $p < 0.05$; the mean of all foil (collapsed across fan levels), $r = -0.19$, $p < 0.05$; the mean of all fan level 2-2 (collapsed across probe), $r = -0.23$, $p < 0.05$; the mean of all reaction time data (collapsed across fan and probe), $r = -0.19$, $p < 0.05$. Correlations were also found between reading rate and reaction times on several levels of fan (i.e., levels 1-1, 2-2, 3-3) and probe (i.e., fact, foil): fact-fan level 1-1, $r = -0.26$, $p < 0.01$; fact-fan level 2-2, $r = -0.19$, $p < 0.05$; fact-fan level 3-3, $r = -0.25$, $p < 0.01$; foil-fan level 1-1, $r = -0.21$, $p < 0.05$; foil-fan level 3-3, $r = -0.25$, $p < 0.01$; the mean of all fact (collapsed across fan levels), $r = -0.25$, $p < 0.01$; the mean of all foil (collapsed across fan levels), $r = -0.24$, $p < 0.01$; the mean of all fan level 1-1 (collapsed across probe), $r = -0.24$, $p < 0.01$; the mean of all fan level 2-2 (collapsed across probe), $r = -0.18$, $p < 0.05$; the mean of all fan level 3-3 (collapsed across probe), $r = -0.27$, $p < 0.01$; the mean of all reaction time data (collapsed across fan and probe), $r = -0.25$, $p < 0.01$. Due to the significant correlations gender and reading rate with the reaction time dependent variables, gender and reading rate will be used as a covariate in analyses of covariance in the analyses of the reaction time data. No significant correlations were found between the number of correct responses (number correct) dependent variable and any demographic or questionnaire factors when the younger and older groups' data were combined. All correlations for this combined data are shown in Table 5 placed in Appendix D.

Older adult group. Pearson Product-Moment Correlations were also calculated for the older and younger adult groups separately. In the data of the older adults who completed the study, significant correlations were found between the STAI state and trait anxiety and the DACL-A and B: STAI state anxiety and DACL-A, $r = 0.58$, $p < 0.01$;

STAI state anxiety and DACL-B, $r = 0.42$, $p < 0.05$; STAI trait anxiety and DACL-A, $r = 0.55$, $p < 0.01$; the STAI trait anxiety and DACL-B, $r = 0.42$, $p < 0.05$. Due to these correlations, ANCOVAs will be conducted on the age-group and mood-group differences on the DACL-A and B results using STAI state and trait anxiety as covariates.

Further significant correlations were found in the combined older adult data between STAI trait anxiety and reaction time: fact-fan level 3-3, $r = 0.37$, $p < 0.05$; foil-fan level 1-1, $r = 0.41$, $p < 0.05$; the mean of all fan level 1-1 (collapsed across probe), $r = 0.36$, $p < 0.05$. Due to the significant correlations between STAI trait anxiety and the reaction time dependent variables for older adults, STAI trait anxiety will be used as a covariate in analyses of covariance in the analyses of the reaction time data. No significant correlations were found between the number correct dependent variable and any demographic or questionnaire factors in the older adult group's data. The correlations for the older adult group are shown in Table 6 found in Appendix D.

Younger adult group. Pearson Product-Moment Correlations were calculated for the younger adult group alone. In the data of the younger adults who completed the study, significant correlations were found between the GDS-SF as well as the STAI state and trait anxiety and the DACL-A and B dependent variables: GDS-SF and DACL-A, $r = 0.30$, $p < 0.01$; GDS-SF and DACL-B, $r = 0.46$, $p < 0.01$; STAI state anxiety and DACL-A, $r = 0.32$, $p < 0.01$; STAI state anxiety and DACL-B, $r = 0.38$, $p < 0.01$; STAI trait anxiety and DACL-A, $r = 0.31$, $p < 0.01$; the STAI trait anxiety and DACL-B, $r = 0.45$, $p < 0.01$. Due to these correlations, ANCOVAs will be conducted regarding age-group and

mood-group differences on the DACL-A and B results using the GDS-SF scores as well as the STAI state and trait anxiety scores as covariates.

Significant correlations were found between reading rate and reaction times on several levels of fan (i.e., levels 1-1, 2-2, 3-3) and probe (i.e., fact, foil): fact-fan level 1-1, $r = -0.32$, $p < 0.01$; fact-fan level 3-3, $r = -0.24$, $p < 0.05$; foil-fan level 1-1, $r = -0.25$, $p < 0.05$; foil-fan level 3-3, $r = -0.31$, $p < 0.01$; the mean of all fact (collapsed across fan levels), $r = -0.26$. $p < 0.05$; the mean of all foil (collapsed across fan levels), $r = -0.27$. $p < 0.01$; the mean of all fan level 1-1 (collapsed across probe type), $r = -0.29$. $p < 0.01$; the mean of all fan level 3-3 (collapsed across probe), $r = -0.30$. $p < 0.01$; the mean of all reaction time data (collapsed across fan and probe), $r = -0.27$. $p < 0.01$. Similarly, significant correlations were found between the WAIS-III Vocabulary raw score and reaction times on several levels of fan (i.e., levels 1-1, 2-2, 3-3) and probe (i.e., fact, foil): fact-fan level 1-1, $r = -0.45$, $p < 0.01$; fact-fan level 2-2, $r = -0.32$, $p < 0.01$; fact-fan level 3-3, $r = -0.36$, $p < 0.01$; foil-fan level 1-1, $r = -0.42$, $p < 0.01$; foil-fan level 2-2, $r = -0.38$, $p < 0.01$; foil-fan level 3-3, $r = -0.27$, $p < 0.01$; the mean of all fact (collapsed across fan levels), $r = -0.40$, $p < 0.01$; the mean of all foil (collapsed across fan levels), $r = -0.38$, $p < 0.01$; the mean of all fan level 1-1 (collapsed across probe), $r = -0.45$, $p < 0.01$; the mean of all fan level 2-2 (collapsed across probe), $r = -0.37$, $p < 0.01$; the mean of all fan level 3-3 (collapsed across probe), $r = -0.33$, $p < 0.01$; the mean of all reaction time data (collapsed across fan and probe), $r = -0.40$, $p < 0.01$. Due to these significant correlations, reading rate and the WAIS-III Vocabulary raw scores will be used as covariates in analyses of covariance of the reaction time data.

Last, there were significant correlations in the younger adult data between the number correct dependent variable and independent factors of education and WAIS-III Vocabulary raw scores for several levels of fan (i.e., levels 1-1, 2-2, 3-3) and probe (i.e., fact, foil): education level and foil-fan level 1-1, $r = -0.24$, $p < 0.05$; vocabulary and foil-fan level 3-3, $r = 0.21$, $p < 0.05$; vocabulary and the mean of all fan level 3-3 (collapsed across probe), $r = 0.21$, $p < 0.05$; vocabulary and the mean of all number correct data (collapsed across fan and probe), $r = 0.20$, $p < 0.05$. Due to the significant correlations between education level and WAIS-III Vocabulary raw scores and the number correct dependent variable, education level and WAIS-III Vocabulary raw scores will be used as covariates in analyses of covariance for number correct data. The correlations for the younger adults group are displayed in Table 7 located in Appendix D.

Assessment of Mood Induction Procedure

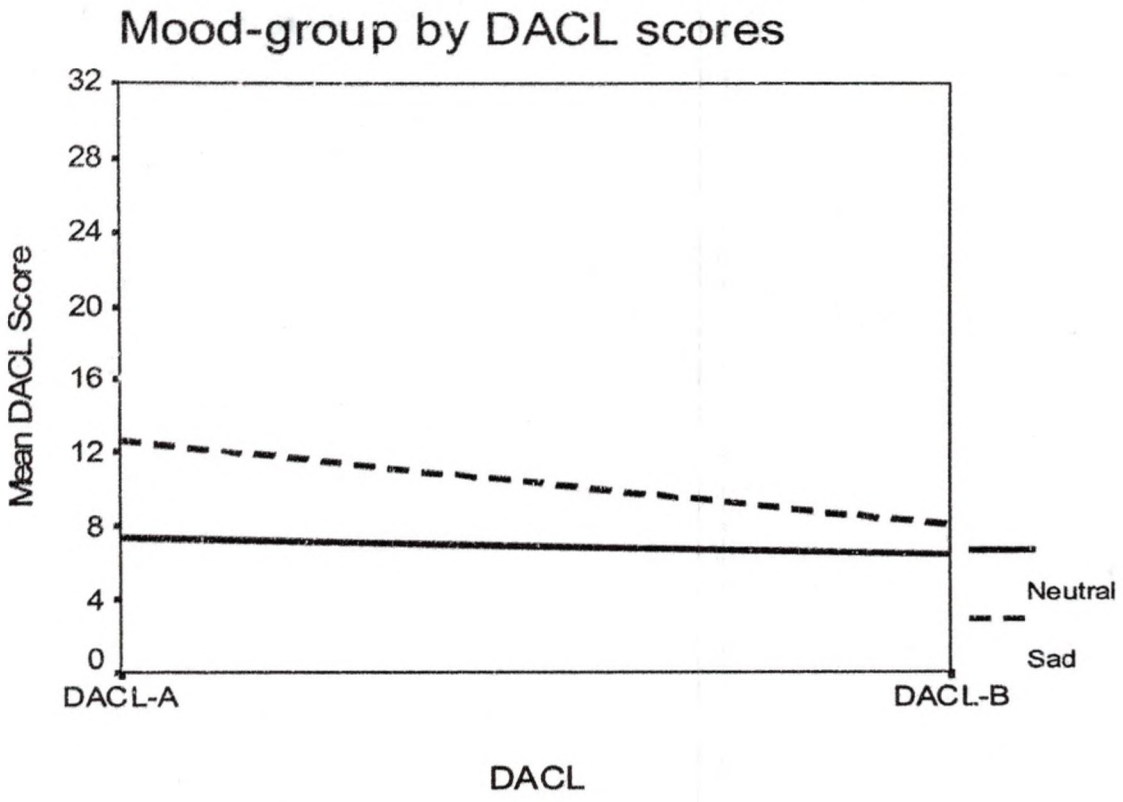
The Depression Adjective Checklist - Form A (DACL-A) was administered to participants immediately after the Seibert and Ellis' (1991a) Mood Induction procedure. A simple ANOVA of the DACL-A scores indicated that there were no significant differences between age-group but, as expected, there were significant differences between mood-group, (neutral = 7.37, sad = 12.65, $F(1, 123) = 12.91$, $p < 0.01$). As previously discussed, there were significant correlations between the DACL-A and the GDS-SF, and both state and trait anxiety as measured by the STAI. Therefore, an ANCOVA was conducted using the GDS-SF, STAI state anxiety scores and STAI trait anxiety scores as covariates. The results still indicated no significant differences between age-groups, a significant difference between mood-groups, $F(1,120) = 14.65$, $p < 0.01$,

and further demonstrated that state anxiety accounted for some variation, $F(1,120) = 4.30$, $p < 0.05$.

The Depression Adjective Checklist - Form B (DACL -B) was administered following the computer task approximately 12-15 minutes after the mood-induction procedure to reassess the participants' mood state. A simple ANOVA of the DACL-B indicated a significant difference between age-groups (older adults = 5.47, younger adults = 8.00, $F(1, 123) = 5.97$, $p < 0.05$); however, no mood-group main effect (neutral = 6.41, sad = 8.03, $F(1, 123) = 0.36$, $p > 0.05$). As above, an analysis of covariance was conducted using GDS-SF, STAI state anxiety, and STAI trait anxiety as covariates. There was no longer a significant main effect of age-group and the STAI trait anxiety was found to account for some variance, $F(1,120) = 4.60$, $p < 0.05$. As described above, the younger adults demonstrated significantly higher STAI trait anxiety ($M = 34.91$) than the older adults ($M = 29.60$), $F(1, 123) = 7.04$, $p < 0.01$. This suggests that the variability in DACL-B scores between groups may be due to preexisting trait anxiety in the younger adults. These ANOVAs are shown in Table 4 located in Appendix D.

A repeated measures ANOVA was conducted comparing the results of the DACL-A and the DACL-B. The Age-group by Mood-group by DACL interaction was not significant, $F(1, 123) = 0.11$, $p > 0.05$. However, the Mood-group by DACL interaction was significant, (DACL-A neutral = 7.37, DACL-A sad = 12.65, DACL-B neutral = 6.41, DACL-B sad = 8.03, $F(1,123) = 11.86$, $p < 0.01$). This interaction is displayed in Figure 1.

Figure 1



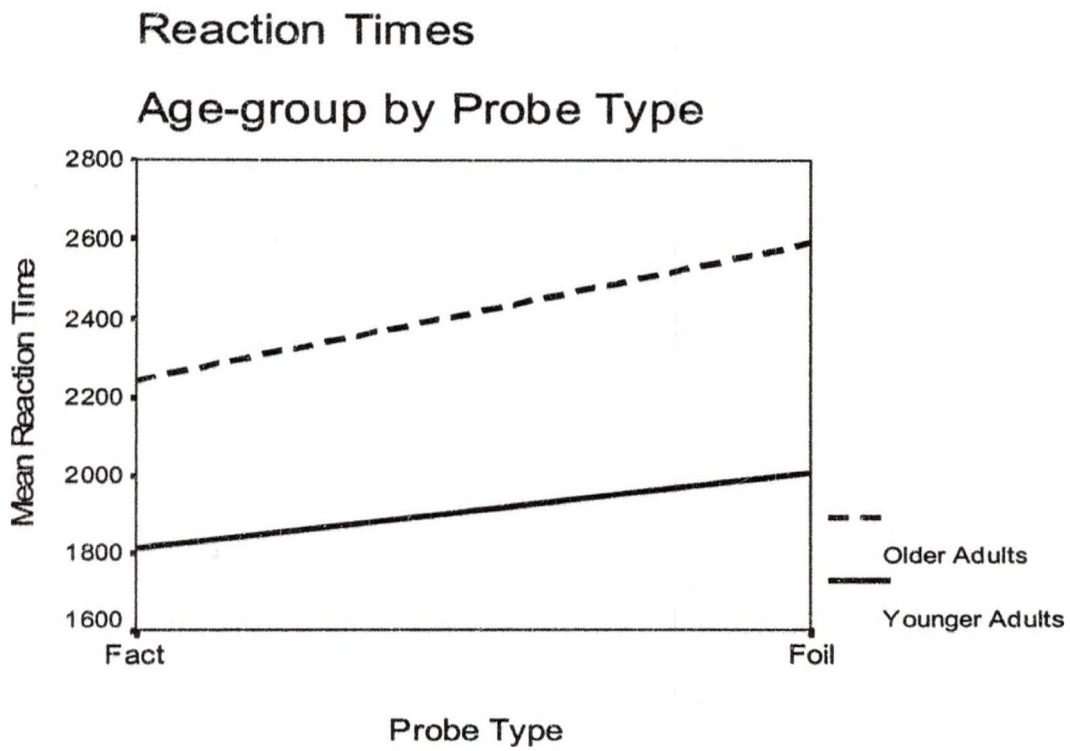
Fan Effects in Recognition

Response times. The median response times of the correct responses, measured in milliseconds, were gathered during the computer task and the mean of the medians was analyzed with a four-way mixed-ANOVA (2 x 2 x 3 x 2). The between subject factors included age-group (older adults and younger adults) and mood-group (neutral and sad) while the within subject factors included fan-level (1-1, 2-2, 3-3) and probe-type (fact sentences and foil sentences). The results indicated there were three main effects. First, the age-group main effect was significant, (older adults = 2418.04, younger adults = 1910.26, $F(1, 123) = 22.77$, $p < 0.01$). Second, there was a significant main effect of fan, (level 1-1 = 1901.21, level 2-2 = 1847.02, level 3-3 = 2342.40, $F(2, 122) = 75.02$, $p <$

0.01). Probe type was the third significant main effect, (fact = 1913.63, foil = 2146.80, $F(1, 123) = 141.52$, $p < 0.01$). The Mood-group main effect was not significant (neutral = 2077.12, sad = 2000.74, $F(1, 123) = 0.17$, $p = 0.68$).

The Age-group by Probe interaction was significant, (older adults-fact = 2245.57, older adults-foil = 2590.51, younger adults-fact = 1810.96, younger adults-foil = 2009.57, $F(1, 123) = 9.61$, $p < 0.01$). This interaction is displayed in Figure 2.

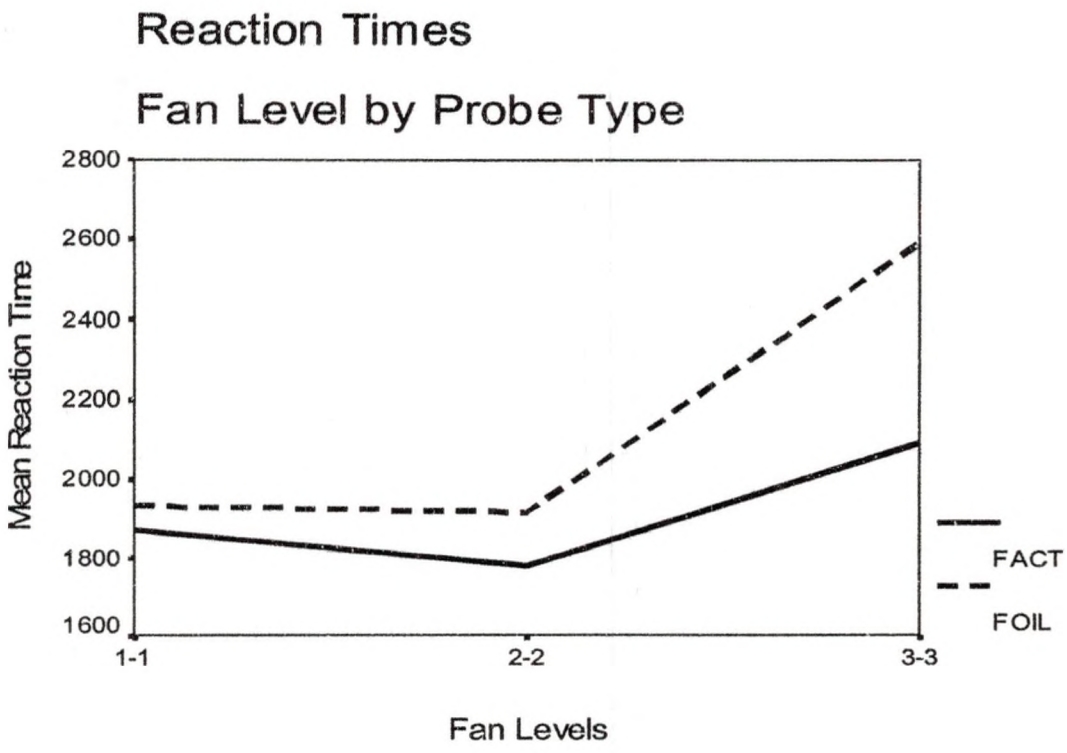
Figure 2



This replicates Gerard et al. (1991), in which the older adults' reaction times were slower than those of the younger adults and all participants reacted slower to the foil sentences than the prelearned fact sentences. Moreover, the magnitude of the difference between the fact and foil reaction times was greater in the older adults than in the younger adults.

Last, as in Gerard et al. (1991) and Gunther et al. (1996), the Fan by Probe interaction was significant, (fact-fan level 1-1 = 1869.83, fact-fan level 2-2 = 1777.56, fact-fan level 3-3 = 2093.48, foil-fan level 1-1 = 1932.59, foil-fan level 2-2 = 1916.49, foil-fan level 3-3 = 2591.31, $\underline{F}(2, 122) = 34.06$, $\underline{p} < 0.01$). The significant Fan by Probe interaction is graphed in Figure 3.

Figure 3



This interaction demonstrates that when collapsed across age-group and mood-group, reaction times were slower on the foil sentences when compared to the pre-learned fact sentences especially at the highest level of fan difficulty (level 3-3). Newman-Keuls post-hoc analyses (alpha 0.01) showed significant differences between fan levels 1-1 and

2-2, 1-1 and 3-3, as well as 2-2 and 3-3 for fact sentences. For foil sentences significant differences were found between fan level 3-3 and levels 1-1 and 2-2. Further, there were significant differences between fact and foil at level 1-1 and 3-3. See Table 8.

Table 8

Reaction Times Across Fan Level and Probe Type

Probe Type	Fan Level 1-1	Fan Level 2-2	Fan Level 3-3
Fact	1869.83 (528.59)	1777.56 (535.84)	2093.48 (616.31)
Foil	1932.59 (550.92)	1916.49 (581.61)	2591.31 (800.59)

Note: The Newman-Keuls critical difference needed for significance for means two steps apart is 66.47 ($\alpha = 0.05$) and 87.83 ($\alpha = 0.01$); the critical difference needed for significance for means three steps apart is 79.76 ($\alpha = 0.05$) and 99.70 ($\alpha = .01$). Standard deviations are in parentheses.

When collapsed across age-group, mood-group, and probe type, there was a significant main effect of Fan, F (2, 122) = 75.01, $p < 0.01$. Reaction times on fan level 3-3 were 441.19 ms. and 495.37 ms. slower than those on fan levels 1-1 and 2-2 respectively which is significant at alpha 0.01. Although the reaction times at level 1-1 were slightly slower than level 2-2, the difference was not significant. See Table 9. When collapsed across age-group, mood-group, and fan level, there was a significant main effect of Probe type, F (1, 123) = 141.52, $p < 0.01$. Reaction times were slower on the foil sentences when compared to the pre-learned fact sentences by 233.18 ms. (The Newman-Keuls critical

difference for means two steps apart and alpha equal to 0.01 is 85.05.) See Table 10.

The Age-group by Fan and Mood-group by Fan interactions were not significant.

Table 9

Reaction Times by Fan Level

Group	Fan Level 1-1	Fan Level 2-2	Fan Level 3-3
RT (SD)	1901.21 (522.07)	1847.02 (5538.44)	2342.40 (666.74)

Note: The Newman-Keuls critical difference needed for significance for means two steps apart is 87.84 ($\alpha = 0.05$) and 116.10 ($\alpha = 0.01$); the critical difference needed for significance for means three steps apart is 105.40 ($\alpha = 0.05$) and 131.74 ($\alpha = .01$). Standard deviations are in parentheses.

Table 10

Reaction Times by Probe Type

	Fact Sentences	Foil Sentences
RT (SD)	1913.62 (526.83)	2146.80 (579.55)

Note: The Newman-Keuls critical difference needed for significance for means two steps apart is 64.36 ($\alpha = 0.05$) and 85.05 ($\alpha = 0.01$). Standard deviations are in parentheses.

The three-way interactions of Age-group by Fan by Probe and Mood-group by Fan by Probe and four-way interaction of Age-group by Mood-group by Fan by Probe (when

all three levels of fan are included) were not significant. These findings were consistent with Gerard et al. (1991) in which their Age-group by Fan by Probe interaction only neared significance and Gunther et al. (1996) in which the Mood-group by Fan by Probe interaction was not significant (when all three levels of fan were included in the analysis). Table 13 (Appendix D) lists all possible interactions and main effects from this analysis and the resulting F scores.

As discussed above, there were significant correlations between the dependent variable reaction time and the independent factors of gender, reading rate, STAI trait anxiety, and the WAIS-III Vocabulary raw scores. Therefore, these variables were used as covariates in the analyses of covariance for the reaction time data. The results of the ANCOVA varied only slightly (in the main effects) from the ANOVA; therefore, the covariates did not account for a significant amount of variance in these analyses. Table 14 located in Appendix D lists all possible interactions and main effects from the ANCOVA and the resulting F scores, degrees of freedom, and p values.

In Gunther et al. (1996) the authors conducted similar analyses as those detailed above with the fan level 2-2 dropped from the analyses. Gunther's (1994) thesis, on which the Gunther et al. (1996) article was published, found that while fan levels 1-1 and 2-2 did not differ significantly, the most difficult fan level of 3-3 did differ significantly from the simplest level 1-1. The same analyses are reported below with this data to see if any of the interactions were significant in the absence of the middle fan level. First, an ANOVA was conducted between fan levels 1-1 and 2-2 to confirm that response times did not differ significantly. As expected, none of the interactions were significant and

there were two significant main effects. Thus level 1-1 vs. level 2-2 are statistically equal. First, there was a main effect of age-group with the older adult group's mean-of-median reaction time being slower than the younger adults', (older adults = 2254.60, younger adults = 1753.25, $\underline{F}(1, 123) = 23.94$, $\underline{p} < 0.01$). Second, there was a main effect of probe, (fact = 1946.06, foil = 2061.79, $\underline{F}(1, 123) = 29.36$, $\underline{p} < 0.01$), in which the participants' reaction times to the foil sentences were significantly slower than their reaction times to the prelearned fact sentences. The main effect of fan was not significant. This analysis was also conducted as an ANCOVA with gender, reading rate, STAI trait anxiety and WAIS-III Vocabulary raw scores as covariates. The main effect of probe did not change but the F value in the main effect of age-group did increase, $\underline{F}(1, 119) = 38.45$, $\underline{p} < 0.01$. None of the covariates accounted for a significant amount of the variance. Tables 15 and 16 located in Appendix D, provide the complete results of these analyses.

Next, an Age-group by Mood-group by Fan by Probe ANOVA between fan level 1-1 and 3-3 was conducted. There were three significant main effects and two significant two-way interactions. The significant main effects were age-group (older adults = 2521.06, younger adults = 1996.14, $\underline{F}(1, 123) = 21.19$, $\underline{p} < 0.01$); fan (level 1-1 = 2028.73, level 3-3 = 2488.47, $F(1, 123) = 119.27$, $\underline{p} < 0.01$); and probe (fact = 1913.63, foil = 2146.80, $F(1, 123) = 111.36$, $\underline{p} < 0.01$). The Age-group by Probe-type interaction was significant, (older adults-fact = 2311.06, older adults-foil = 2731.07, younger adults-fact = 1873.90, younger adults-foil = 2118.38, $F(1,123) = 7.77$, $\underline{p} < 0.01$). Secondly, the Fan by Probe interaction was significant, (fact-fan level 1-1 = 1988.01, fact-fan level 3-3

= 2196.94, foil-fan level 1-1 = 2069.45, foil-fan level 3-3 = 2779.99, $F(1, 123) = 68.07$, $p < 0.01$). Unlike in Gunther et al. (1996), however, the Mood-group by Fan interaction was not significant, thus the mood effects on performance at various levels of fan difficulty were not replicated in this experiment. The four-way and three-way interactions were not significant. An ANCOVA was conducted with gender, reading rate, STAI trait anxiety, and WAIS-III vocabulary entered as covariates. The results of this ANCOVA did differ slightly in the F and p values of the main effects but the overall significance did not change. The results of the within-subjects main effects and interactions were identical to the ANOVA. These results of the ANOVA and ANCOVA analyses are available in Tables 17 and 18 found in Appendix D.

Number correct. A Pearson Product-Moment Correlation was calculated between mean-of-the-median response times and mean number of correct responses (collapsed across the conditions of fan, probe, and age-group) to test for a Speed-Accuracy Trade Off (SATO). When conducting a SATO analysis, ideally one wants to find that as reaction times increase (i.e., people's reactions get slower), the number of correct responses decreases (i.e., people's number of errors increase). The results indicated that no SATO was present in this data, $r = -0.18$, $p < 0.05$. In other words, as the participants' reaction time speed slowed, their number of correct responses decreased (i.e., their number of errors increased) thus raising their error rate.

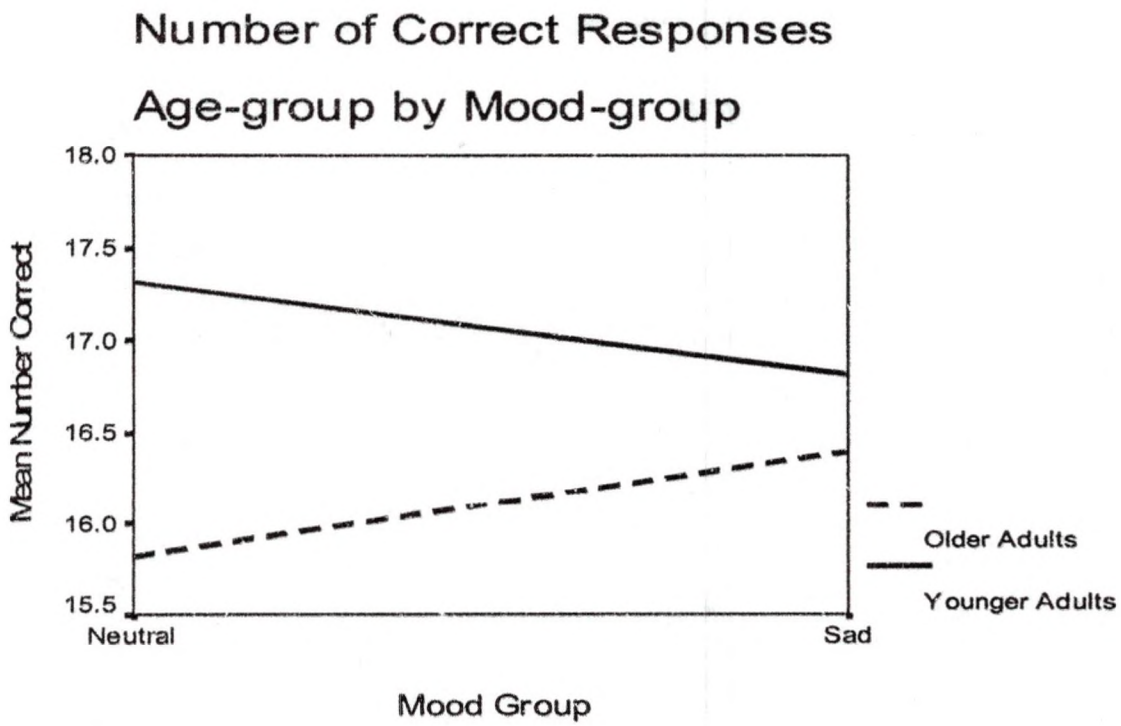
The number of correct responses to the computerized recognition test were analyzed with a four-way mixed-ANOVA (2 x 2 x 3 x 2). The between-subject factors included age-group (older adults and younger adults) and mood-groups (neutral and sad)

while the within-subject factors included fan-level (1-1, 2-2, 3-3) and probe-type (fact sentences and foil sentences). There were three significant main effects: Age-group (older adults = 16.06, younger adults = 16.98, $F(1, 123) = 18.50$, $p < 0.01$); fan (level 1-1 = 17.56, level 2-2 = 17.40, level 3-3 = 15.33, $F(2, 122) = 80.31$, $p < 0.01$); probe (fact = 17.18, foil = 16.35, $F(1, 123) = 51.21$, $p < 0.01$).

There were four significant two-way interactions. First, the Age-group by Fan interaction (collapsed across probe and mood-group) was significant, (older adults at fan level 1-1 = 17.33, older adults at fan level 2-2 = 17.00, older adults at fan level 3-3 = 13.83, younger adults at fan level 1-1 = 17.63, younger adults at fan level 2-2 = 17.52, younger adults at fan level 3-3 = 15.79, $F(2, 122) = 10.39$, $p < 0.01$). These findings suggest that there was a fan effect for both age-groups but the magnitude of the number of correct responses decreased proportionally more in the older adult group as the level of fan difficulty increased, thus replicating Gerard et al. (1991). Second, as in Gerard et al. (1991), the Age-group by Probe interaction (collapsed across fan and mood-group) was also significant in that there was a smaller age difference in the number of correct responses on fact than on foil, (older adults - fact = 16.77, older adults - foil = 15.34, younger adults – fact = 17.31, younger adults – foil = 16.66, $F(1, 123) = 9.72$, $p < 0.01$). Third, the Fan by Probe interaction (collapsed across age-group and mood-group) was significant replicating both Gerard et al. (1991) and Gunther et al. (1996), (fact-fan level 1-1 = 17.46, fact-fan level 2-2 = 17.46, fact-fan level 3-3 = 16.61, foil-fan level 1-1 = 17.67, foil-fan level 2-2 = 17.33, foil-fan level 3-3 = 14.04, $F(2,122) = 43.34$, $p < 0.01$). Fourth, the Age-group by Mood-group interaction was significant, (older-neutral adults =

15.82, older-sad = 16.40, younger-neutral = 17.32, younger-sad = 16.82, $\underline{F}(1,123) = 5.88$, $\underline{p} < 0.05$). Interestingly, the sad older adults were statistically more accurate than the neutral older adults contrary to what was predicted, while the neutral younger adults were more accurate than the sad-younger adults. The Newman-Keuls post hoc analysis also demonstrated that the younger adults' number of correct responses were statistically higher than the older adults in both mood conditions. See Figure 4 and Table 19.

Figure 4



There were two three-way interactions that were significant. First, the Mood-group by Fan by Probe interaction was significant, $\underline{F}(2, 122) = 4.78$, $\underline{p} < 0.05$. The means are displayed in Table 20 and demonstrated in Figure 5. Clearly the number of correct

responses decreases as the fan level difficulty increases. The differences related to mood-group are interesting and unexpected.

Table 19

Number Correct by Age- and Mood-groups

Age-groups	Neutral	Sad
Older Adults	15.82 (1.92)	16.40 (0.79)
Younger Adults	17.32 (0.65)	16.82 (0.86)

Note: The Newman-Keuls critical difference needed for significance for means two steps apart is 0.26 ($\alpha = 0.05$) and 0.34 ($\alpha = 0.01$). Standard deviations are in parentheses.

Table 20

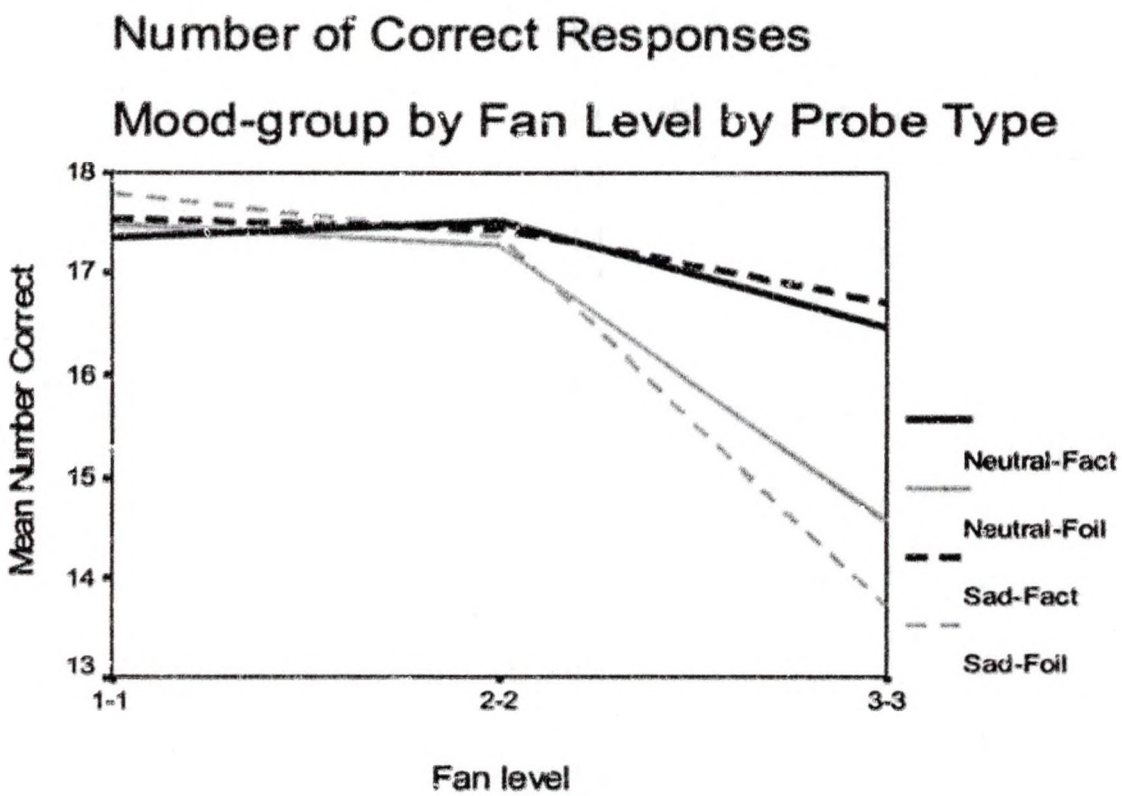
Number Correct by Mood-group, Fan Level, and Probe Type

Fan Level	Mood: Neutral		Mood: Sad	
	Probe type: Fact	Probe type: Foil	Probe type: Fact	Probe type: Foil
Fan level 1-1	17.35	17.47	17.53	17.79
Fan level 2-2	17.51	17.27	17.44	17.37
Fan level 3-3	16.47	14.57	16.71	13.71

Note: The top value per cell is 18.

Although the Mood-group by Fan by Probe interaction was not significant in the Gunther et al. (1996) experiment, we would have anticipated the sad group to make more errors than the neutral group across probe conditions; however, this was not the case. Second, the Age-group by Fan by Probe interaction was also significant, $F(2,122) = 4.02$, $p < 0.05$.

Figure 5



The means are displayed in Table 21 and demonstrated in Figure 6. As expected, the older adults made more errors than the younger adults across the fan levels and made proportionally more errors at the more difficult fan level 3-3 as well as on the unstudied foil sentences. Interestingly, this three-way interaction was not significant in the Gerard

et al. (1991) findings. The four-way interaction was not significant. Table 22 situated in Appendix D lists all possible interactions and main effects from this analysis.

Figure 6

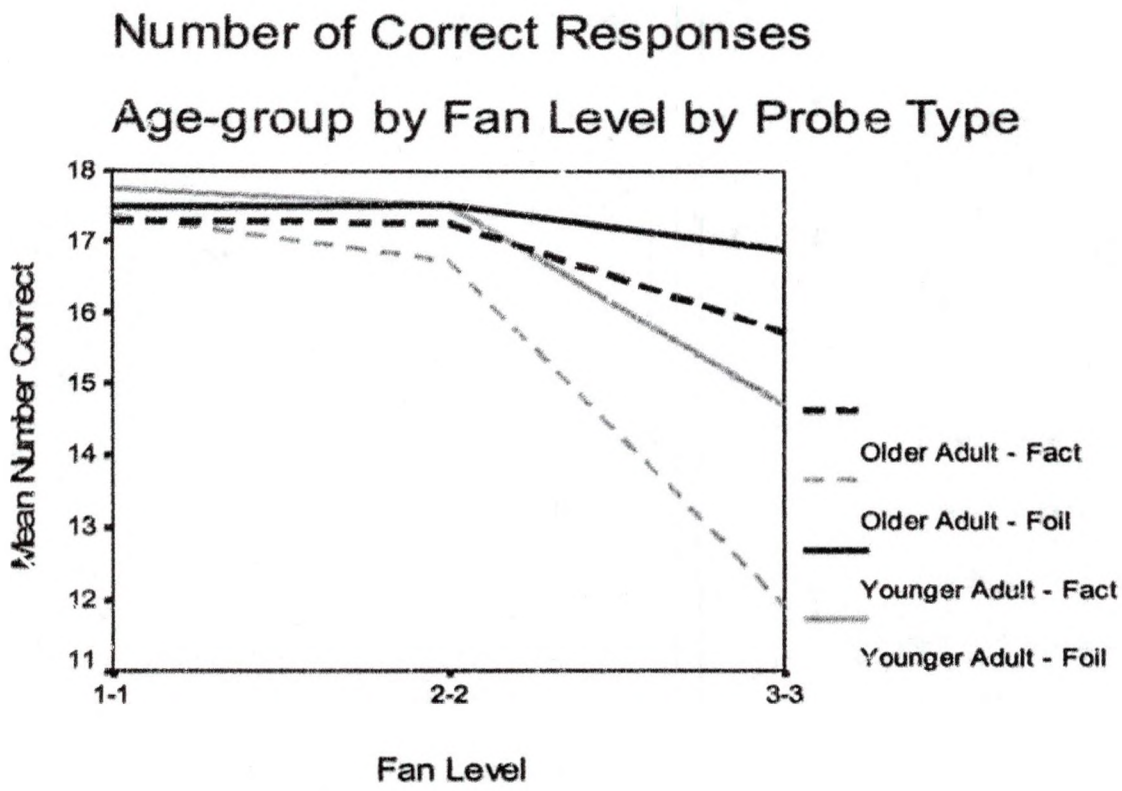


Table 21

Number Correct by Age-group, Fan Level, and Probe Type

Fan Level	Older Adults		Younger Adults	
	Probe type: Fact	Probe type: Foil	Probe type: Fact	Probe type: Foil
Fan level 1-1	17.30	17.37	17.51	17.76
Fan level 2-2	17.27	16.73	17.53	17.52
Fan level 3-3	15.73	11.93	16.89	14.69

Note: The top value per cell is 18.

As previously discussed, there were significant correlations between the dependent variable reaction time and the independent factors of education level and the WAIS-III Vocabulary raw scores. Therefore, these variables were used as covariates in analyses of covariance for the number correct data. These covariates did not account for a significant amount of variance and the results of the analysis of covariance were identical to the analysis of variance just discussed. Table 23 placed in Appendix D lists all possible interactions and main effects from this analysis and the resulting F scores.

CHAPTER IV

Discussion

The present study was designed to investigate the impact of age and a sad-induced-mood state on the retrieval of information from long-term memory. Past research has shown that both intense mood states and advancing age negatively affect the working memory's ability to inhibit task-irrelevant information, thus interfering with the encoding and retrieval of task relevant information (Ellis, 1985; Ellis & Ashbrook, 1989; Ellis et al., 1985; Ellis et al., 1984; Gerard et al., 1991; Gunther et al., 1996; Hasher et al., 1991; Hasher and Zacks, 1988; Leight & Ellis, 1981; Lubin, 1965; McDowd & Oseas-Kreger, 1991; Sarason et al., 1986; Seibert & Ellis, 1991a, 1991b; Sherwood et al., 1981). This study was modeled after Gunther et al. (1996) and Gerard et al. (1991) which used Anderson's (1983) fan effect paradigm to investigate the effects of induced mood on younger adults' long-term memory and the effects of aging on older adults' long-term memory respectively. By combining these two studies we hoped to replicate the findings that participants in the sad mood condition would have longer reaction times and higher error rates than those in the neutral mood condition with differences between mood groups increasing as recognition difficulty increased. Further, we expected to find that the older adults' performance would be slower and less accurate than the younger adults with the differences increasing as the recognition difficulty increased. Last, we expected to find an age-group by mood-group interaction in that the magnitude of the differences

between the sad and neutral group's reaction times and error rates would be greater for the older adults than the younger adults.

While we did find an Age-group by Fan-level interaction for number of correct responses (older adults made proportionally more errors as the recognition difficulty increased than did the younger adults), none of the other predictions were confirmed by the current study. Possible reasons for this may include low power due to the low proportion of participants who completed the study and whose mood was successfully altered. Power is defined as the sensitivity of an experiment to successfully discover differences between groups when they are present (Keppel, 1982).

The collection of data presented two obstacles that had not been anticipated. First, many of the participants (especially the older adults) had difficulty learning the target facts to criterion and thus did not complete the study. Second, the effects of the sad-induced mood failed to last throughout the computer task. These two impediments will first be discussed followed by an elucidation of the experimental findings, the limitations of these findings, and directions for future research.

As discussed in the Results section, of the 199 participants whose data could be utilized in this experiment (three participants were dropped because of missing computer data or failures to follow the experimental protocol) only 63.82% were able to learn the target facts to criterion level. Further, the completion rates were lower for the older adults. While 62.16% of the younger males and 83.15% of the younger females completed the study, only 40.74% of the older males and 41.30% of the older females

completed the study. While the reason for these high noncompletion rates may never be fully understood, several results may provide some clues.

Firstly, as you may recall, during the learning phase participants were asked to learn target facts by studying them and then responding to a set of questions regarding the target facts. This process was repeated unless they had answered all the questions correctly in two consecutive trials (i.e., each round of studying the sentences and answering the questions was considered one trial). The results found that the older adult group who did not learn the target facts to criterion (thus not completing the study) finished slightly fewer trials than the older adult group who did complete the study. However, the younger adults demonstrated the opposite finding in that the younger adults who did not finish the study went through slightly more trials than the group who did complete the study. As there were no differences between age-groups in the number of trials completed--nor were there significant differences between those who completed the study and those who did not complete the study (when collapsed across age-group)--it is difficult to say why this interaction appeared. As previously discussed, the older adults appeared to be distressed by the difficulty of the experiment and personal communication with two other researchers confirmed that the same observation was made in other laboratories (R. T. Zacks, personal communication, September 22, 1999; G. A. Radvansky, personal communication, September 29, 1999). Therefore, one might speculate that the older adults were more distressed by the difficulty of the task and so chose to terminate the study early.

Secondly, the WAIS-III Vocabulary raw scores and the WAIS-III Vocabulary age-scaled scores indicated that the group of participants who completed the study had significantly higher vocabulary scores than the group who did not complete the study. This difference might be due simply to a different level or command of the English language that provided some participants with an advantage in the learning phase of the study. However, the words used in each of the target facts are well known words such as apple and doctor. A more intriguing hypothesis would be that the WAIS-III Vocabulary scores are acting as a rough estimate of current intellectual functioning (IQ). In fact, the vocabulary subtest of the WAIS-R intelligence test was found to have high correlations with the Full Scale IQ score and combined with the Block Design subtest, can be used to estimate Full Scale IQ if the whole WAIS-R could not be administered (Sattler, 1992). Although this information is based on the research of the WAIS-R, it is assumed that the results would be similar for the WAIS-III since the vocabulary subtests did not change much between versions. Therefore, it could be hypothesized that the group of participants who successfully learned the target facts and completed the study were functioning at a higher intelligence level than those who did not. This hypothesis is supported by the findings that long-term memory performance has been found significantly related to intellectual performance (Neubauer, Riemann, Mayer, & Angleitner, 1997; Alexander and Smales, 1997) and crystallized intelligence, as measured by the WAIS-R, accounted for considerable variance in immediate memory (Christensen et al., 1994; Giambra, Arenberg, Zonderman, Kawas, and Costa, 1995).

The second unexpected obstacle in the experiment had to do with the effectiveness of the mood-induction procedure. In Gunther et al. (1996) the DACL-A and B forms measured the effects of the induced moods (i.e., happy, sad, neutral) and demonstrated that sad and neutral groups DACL scores differed significantly both before and after the computer task. That pattern, however, was not found in this study. The results confirmed that just prior to the onset of the computer task (just after the preceding mood-induction procedure) the DACL-A scores were significantly different between the sad and neutral mood-groups when collapsed across age-group. (As expected there were no age-group differences in these scores.) The DACL-B scores were gathered approximately 12 to 15 minutes after the DACL-A, immediately following the completion of the computer task. The results indicated that there was no longer a significant difference between mood-groups and, in fact, the sad group's score (8.03) falls below what would be considered a sad mood score on the DACL (10+). There was initially a significant difference between age groups; however, this significant difference was removed after the STAI trait anxiety covariate was added to the analysis. The results indicated that the younger adults had higher STAI trait anxiety scores than the older adults did and that this is likely why the younger adults had higher DACL-B scores than the older adults. This unexpected failure to replicate Gunther et al's. successful mood induction (of young adults only) is difficult to explain. One could assume that it is due to the inclusion of older adults in the analysis (as this is the first time this mood induction procedure had been used with older adults). However, upon further examination of the results both the sad-older adult group's mean score (5.08) and the sad-younger adult

group's mean score (8.56) fall below the range that would indicate a sad mood state (10+). Although we will continue to discuss the experimental findings of this study involving mood-group differences, these results must be viewed with some caution since the expected sad-induced-mood effects were not found after the completion of the computer task and there is no way to determine at what point during the computer task the sad mood effects dissipated.

In the present study, the impact of age on the effects of salient-induced-mood states and the retrieval of information from long-term memory was studied. As in Gerard et al. (1991), our results indicated that both younger and older participants demonstrated a fan effect in that reaction times and error rates increased as fan level complexity increased. Gerard et al. also found a significant Age-group by Fan interaction in which the reaction time fan effect was greater in the older adults than in the younger adults across the increasing fan levels. Gerard et al. had theorized that the older adults inhibited less irrelevant information while learning the target facts and allowed the irrelevant information to remain in the working memory for longer periods of time than did the younger adults. Therefore, the older adults would have links in the mental lexicon between the target facts and the irrelevant thoughts. During the speeded recognition phase, the older adults would again have difficulty inhibiting the recall of these irrelevant associations especially at the more difficult fan levels thus slowing their reaction times at the most difficult fan level than at the easiest fan level. This Age-group by Fan interaction was not significant in the current study either when all three levels of fan were included or when the only fan levels of 1-1 and 3-3 were examined. This failure to

replicate is possibly due to small cell sizes among the older adults and a very low observed power (0.09).

The Age-group by Fan interaction was significant for the number of correct responses, replicating Gerard et al. (1991). This replication supports Gerard et al's. hypothesis that older adults would again have more difficulty than the younger adults inhibiting the recall of these irrelevant associations thus decreasing their number of correct responses (or increasing their error rate) at the most difficult fan level than at the easiest fan level.

Gunther et al. (1996) found younger adult participants induced with sad mood state had mean-of-the-median reaction times and error rates greater than the neutral-induced-mood group resulting in a Mood-group by Fan level interaction. Gunther et al. suggested that the induction of strong mood states, especially sad mood states, result in reduced inhibition of mood-related, task-irrelevant thoughts. Neither the Mood by Fan interaction nor the Mood-group main effect were significant nor were they in the predicted direction in the reaction time data. The power or sensitivity of these analyses were very low (0.10/0.05 respectively) and, therefore, we cannot clearly say that the results of Gunther et al. were contradicted. Rather, the power was insufficient to either support or contradict their finding.

With regard to the number of correct responses, the Mood-group by Fan interaction neared significance but, unfortunately, the predicted effect was not significant. In the Mood-group main effect, the two groups' means were virtually identical and, therefore, there was no significant effect. The power or sensitivity of the Mood-group by

Fan interaction (0.50) was higher than the reaction time analysis but still not as powerful as one would hope to see in behavioral science research. A power of 0.80 is said to offer a reasonable balance between Type I and Type II errors in behavioral science research (T. V. Petros, Experimental Design, personal communication, February 3, 1995). Thus, again we cannot confidently say that this interaction was not present. The power of the Mood-group main effect was very low (0.04), and although the results were not in the predicted direction, the power or sensitivity of the experiment was insufficient to support or contradict the hypothesis.

Last, the current study predicted that there would be an Age-group by Mood-group by Fan interaction in that the magnitude of the difference between the older-sad group and the older-neutral group would be greater than the magnitude of the difference between the younger-sad group and the younger-neutral group as fan level increases (for both reaction times and error rates). Although the Age-group by Mood-group by Fan interaction was in the predicted direction, it was not significant for reaction time data. The same interaction for the number of correct responses was neither significant nor in the predicted direction. The power or sensitivity of the reaction time analysis (0.11) and the number correct analysis (0.06) were very small and, therefore, it can be said the power was insufficient to find these interactions, if they existed.

Although the predicted interactions were not significant, it is notable that overall the older adults had slower reaction times and made fewer correct responses than the younger adults thus demonstrating a main effect of age, as is common in aging research (Allen, Madden, Weber, & Groth, 1993; Fisher & Glaser, 1996; Gerard et al., 1991;

Kellas, Ferraro, & Simpson, 1988; Kitzan et al., 1999). This does support the contention that older adults have more difficulty with the long-term-memory recognition than do the younger adults--perhaps due to the older adults having more irrelevant thoughts interfering with the learning and recognition of the target facts (Gerard et al., 1991; Hasher and Zacks, 1988). The powers involved in all analyses of mood-group were small as well and, therefore, no conclusions can be drawn regarding how sad or neutral mood induction may have influenced performance. Last, the older-neutral group made more errors than the older-sad mood group whereas the younger-neutral group made fewer errors than their sad age counterparts. This resulted in an Age-group by Mood-group interaction in the number correct data. This result is unexpected, as one would predict that the sad-group (regardless of age) would make more errors than the neutral group because of mood-relevant, off-task thoughts present during learning and recognition. It is unclear why the older-neutral group would have made more errors than the older sad-group.

Unfortunately, the limitations of this study's findings are vast for a number of reasons. First, the long-term-memory task presented a more formidable challenge for both younger and older adults than had been anticipated. This resulted in small cell sizes especially among the older adults. Consequently, many of our analyses failed to have adequate power or sensitivity to find the predicted effects, if they were truly present. In September 1999, two of the authors of Gerard et al. (1991), Dr. Rose Zacks and Dr. Gabrielle Radvansky, responded via e-mail to an inquiry I made about their noncompletion rates in studies using the Anderson (1983) fan effect paradigm. They

responded that, although they had not encountered noncompletion rates as high as in the current study, they had witnessed the older adults in their studies experiencing undue distress by the long-term-memory task. They have thus stopped using the Anderson fan effect paradigm in their research (R. T. Zacks, personal communication, September 22, 1999; G. A. Radvansky, personal communication, September 29, 1999).

Moreover, the Seibert and Ellis (1991a) stimuli were slightly reworded for the current study so they could be used with the older adult population as well as the younger adult population for whom they were created. Although the induced mood procedures appear to have been effective immediately after the induction in producing the desired DACL scores for each mood type, the induced mood did not last throughout the entire computer task. In addition to the weak powers involved in these analyses, it is difficult to draw any conclusions about the effects of mood in this study. After the data collection began on this experiment, a study was published demonstrating the successful induction of sad mood states in older adults (Fox et al., 1998). This study used a different set of self-referencing statements and music to maintain the mood.

Future research studies should utilize long-term-memory paradigms that offer a more attainable memorization goal than the fan-effect paradigm used in this experiment. Further, the Fox et al., (1998) mood induction procedure using self-referencing statements accompanied by music should be used for the mood induction procedure as it has been demonstrated to effectively induce and maintain sad mood states in older adults whereas our modified version of Seibert and Ellis's (1991a) stimuli failed to sustain the desired mood effects.

Although this study was unsuccessful in understanding how sad induced moods may effect the long-term memory of older adults, this area of research remains worthwhile. It holds the potential for helping us to better understand the implications of mood on the cognitive functioning of older adults and to better distinguish between "normal vs. aberrant" cognitive functioning in old age. With many older adults experiencing depression and subclinical dysphoria as well as signs of dementia, it will be important for researchers to continue to define the boundaries of normal aging. This will allow better understanding of abnormal cognitive changes in older adults and hopefully move toward prevention and treatment of depression-induce dementia. Although some research has provided insightful findings of correlations between aging, mood, and cognitive declines, the use of induce-mood paradigms offers researchers the opportunity to begin delineating the cause and effect of cognitive declines in aging.

APPENDICES

APPENDIX A

FORMS

GDS-SF

Choose the Best answer for how you have felt over the past week:

1. Are you basically satisfied with your life?_____YES / NO
2. Have you dropped many of your activities and interests?_____YES / NO
3. Do you feel that your life is empty?_____YES / NO
4. Do you often get bored?_____YES / NO
5. Are you in good spirits most of the time?_____YES / NO
6. Are you afraid that something bad is going to happen to you?_____YES / NO
7. Do you feel happy most of the time?_____YES / NO
8. Do you often feel helpless?_____YES / NO
9. Do you prefer to stay at home, rather than going out and doing new things?_____YES / NO
10. Do you feel you have more problems with memory than most?_YES / NO
11. Do you think it is wonderful to be alive now?_____YES / NO
12. Do you feel pretty worthless the way you are now?_____YES / NO
13. Do you feel full of energy?_____YES / NO
14. Do you feel that your situation is hopeless?_____YES / NO
15. Do you think that most people are better off than you are? _____YES / NO

Consent Form: Effects of Induced Mood on Cognitive Processing in Healthy Older and Healthy Younger Adults

The UND Psychology Department supports the practice of protection of human subjects in experimental research. The following information is provided so that you may decide if you wish to participate in this experiment or not. You are free at any time during the experiment to withdraw your participation for any reason whatsoever. Also, if you do decide not to participate, such a decision will not in any way prejudice your future relations with UND, the psychology department, psychology faculty, or the psychology staff.

All data collected in the experiment will remain confidential and will be used for research purposes only. Subject numbers will be assigned to each participant so as not to identify any data with a particular individual. Data will also be analyzed from a group perspective rather than an individual perspective.

All participants will be asked to fill out the following: A) a consent form, B) a background information form, C) a mood scale, D) an anxiety scale, and E) a short vocabulary test. After filling out this information the actual experiment will begin. The actual experiment will consist of a memory task and computer recall task which is designed to measure cognitive performance. In between the memory and recall tasks, participants will be asked to read and concentrate on either neutral or unpleasant sentences. The computer recall task is very easy to perform and will involve pressing keys on a computer keyboard. You will be shown sentences one at a time on the computer screen and be asked to determine if it is one you memorized during the memory task. If it is a prememorized sentence you will press a specific key. If it is not a prememorized sentence you will press a different key. Experience with computers is not a prerequisite for participating in this experiment. In return for your participation, you will receive either (1) two research participation extra-credits for your psychology class (young adult) or a $5.00 per hour (maximum of $10.00) honorarium (older adult).

Your signature below indicates that you have thoroughly read this consent form and agree to participate. Do you have any questions? If you have any questions at any time regarding this experiment, feel free to contact Laura Kitzan (219/484-4463) or Dr. Ric Ferraro (777-2414). Thank you.

Participant Signature Date Experimenter Signature Date

Print Participant's Name Clearly Subject ID#

Background information questionnaire

Before we begin, I would like you to answer these questions as well as those found on the reverse side of this page. Thank you.

1. Sex: M F (circle one)

2. Ethnicity: _____

3. Date of Birth: _____

4. Educational History:

   A. High School Graduation Year: _____ Degree: _____

   B. College Graduation Year: _____ Degree: _____

      If currently in college, circle class: FR SO JR SR

   C. Graduate School Graduation Year(s): _____

      Degree(s): _____

5. Using the following scale, please circle the number which corresponds to your current health level in comparison to others your age.

1	2	3	4	5
Excellent	Above Average	Average	Below Average	Poor

6. If you are currently taking any medication(s), would you please describe the type(s) and quantity(s).

_____

_____

_____

_____

State-Trait Anxiety Inventory*

SELF-EVALUATION QUESTIONNAIRE (STAI Form Y-1)

Directions: A number of statements which people have used to describe themselves are given below. Read each statement and then circle the appropriate value to the right of the statement to indicate how you feel right now, that is, at this moment. There are no right or wrong answers. Do not spend too much time on any one statement but give an answer which seems to describe your present feelings best.

1 = Not at all
2 = Somewhat
3 = Moderately so
4= Very much so

1. I feel calm 1 2 3 4
2. I feel secure 1 2 3 4
3. I am tense 1 2 3 4
4. I feel at strained 1 2 3 4
5. I feel at ease 1 2 3 4
6. I feel upset 1 2 3 4
7. I am presently worrying over possible misfortunes 1 2 3 4
8. I feel satisfied 1 2 3 4
9. I feel frightened 1 2 3 4
10. I feel comfortable 1 2 3 4
11. I feel self-confident 1 2 3 4
12. I feel nervous 1 2 3 4
13. I am jittery 1 2 3 4
14. I feel indecisive 1 2 3 4
15. I am relaxed 1 2 3 4
16. I feel content 1 2 3 4
17. I am worried 1 2 3 4
18. I feel confused 1 2 3 4
19. I feel steady 1 2 3 4
20. I feel pleasant 1 2 3 4

*Used with permission of Mind Garden, Inc. Original printed form was used in the study but retyped here to meet dissertation format requirements.

State-Trait Anxiety Inventory*

STAI Form Y-2

Directions: A number of statements which people have used to describe themselves are given below. Read each statement and then circle the appropriate value to the right of the statement to indicate how you generally feel. There are no right or wrong answers. Do not spend too much time on any one statement but give an answer which seems to describe how you generally feel.

1 = Almost never
2 = Sometimes
3 = Often
4= Almost always

21. I feel pleasant 1 2 3 4
22. I feel nervous and restless 1 2 3 4
23. I feel satisfied with myself 1 2 3 4
24. I wish I could be as happy as others seem to be 1 2 3 4
25. I feel like a failure 1 2 3 4
26. I feel rested 1 2 3 4
27. I am "calm, cool, and collected" 1 2 3 4
28. I feel that difficulties are piling up so that I cannot overcome them 1 2 3 4
29. I worry too much over something that really doesn't matter 1 2 3 4
30. I am happy 1 2 3 4
31. I have disturbing thoughts 1 2 3 4
32. I lack self-confidence 1 2 3 4
33. I feel secure 1 2 3 4
34. I make decisions easily 1 2 3 4
35. I feel inadequate 1 2 3 4
36. I am content 1 2 3 4
37. Some unimportant thought runs through my mind and bothers me 1 2 3 4
38. I take disappointments so keenly that I can't put them out of my mind 1 2 3 4
39. I am a steady person 1 2 3 4
40. I get in a state of tension or turmoil as I think over my recent concerns and interests 1 2 3 4

*Used with permission of Mind Garden, Inc. Original printed form was used in the study but retyped here to meet dissertation format requirements.

WAIS-III Vocabulary Subtest – Word list

1. Bed
1. Ship
3. Penny
4. Winter
5. Breakfast
6. Repair
7. Assemble
8. Yesterday
9. Terminate
10. Consume
11. Sentence
12. Confide
13. Remorse
14. Ponder
15. Compassion
16. Tranquil
17. Sanctuary
18. Designate
19. Reluctant
20. Colony
21. Generate
22. Ballad
23. Pout
24. Plagiarize
25. Diverse
26. Evolve
27. Tangible
28. Fortitude
29. Epic
30. Audacious
31. Ominous
32. Encumber
33. Tirade

Directions to Participants

When the examiner tells you to begin, turn this page and start immediately to read the selection on the next page. At the end of one minute the examiner will call "Mark." Circle the last word you read just prior to the examiner saying "Mark." Wait for the signal to turn this page.

* * *

Thespis was supposed to have been the first poet who stepped out 6
of the chorus and devised a dialogue with its members to make his 19
poem more vivid. He was an Icarian, and his first official perfor- 32
mance is supposed to have taken place in 534 B.C. The fashion he 42
set quickly moved to Athens. 54

Meanwhile a boy had been born who was to make a new thing of 60
all tragedy. His name was Aeschylus. 74

He was born in 525 B.C., at Eleusis, a little town twelve miles 82
from Athens. At the age of twenty-six, he had written a tragedy, and 94
in 484 B. C., when he was forty-one, he won the tragedy prize. He 107
was to win it twelve times more before he died. 121

Now, in writing tragedy, Aeschylus did two things that greatly 128
changed the celebrations. Up to this time, there had not been what 139
we know as plays. There were only the single actor and the chorus. 152
Nothing much could happen in the orchestra while this was the 163
custom. The actor could talk to the chorus, or he could recite his 175
poem. 183

But Aeschylus put on two actors, and was then able to make his 189
poem an imitation of the actual happenings of the legends the 202
Greeks knew. One character could tell the story by talking to 212
another, messengers could bring news. Kings could quarrel, prophets 223
could warn foolish warriors. With the two actors and the chorus it 232
was possible to make almost any story live again in speech and 245
action before men's very eyes. 256

The second gift of Aeschylus grew out of the first. With the new 262
form of making a poem, he brought great skill as a poet. As this was 276
fused with the acting out of the legends he retold, a new kind of 291
poetry was born. In epic poetry, the listeners could hear about their 305
heroes. In this new tragedy, they saw and listened to them. 317

The great Prometheus, chained in torment by Zeus because he 325
had stolen fire from heaven for men, suffered his agony before their 338
eyes and foretold to them the triumph he must win. Agamemnon, 350
proud and sinful, came back from Troy in triumph to be murdered 360
by his own wife. 370

DACL-A

Directions: Below are listed some adjectives. Please place a check mark next to those adjectives that correspond to how you feel at this time (i.e., right now).

____ Wilted
____ Safe
____ Miserable
____ Gloomy
____ Dull
____ Gay
____ Low-spirited
____ Sad
____ Unwanted
____ Fine
____ Broken Hearted
____ Down-cast
____ Enthusiastic
____ Failure
____ Afflicted
____ Active
____ Strong
____ Tortured
____ Listless
____ Sunny
____ Destroyed
____ Wretched
____ Broken
____ Light-hearted
____ Criticized
____ Grieved
____ Dreamy
____ Hopeless
____ Oppressed
____ Joyous
____ Weary
____ Droopy

DACL-B

Directions: Below are listed some adjectives. Please place a check mark next to those adjectives that correspond to how you feel at this time (i.e., right now).

____ Downhearted
____ Lively
____ Unfeeling
____ Alone
____ Unhappy
____ Alive
____ Terrible
____ Poor
____ Forlorn
____ Alert
____ Exhausted
____ Heartsick
____ Bright
____ Glum
____ Desolate
____ Composed
____ Clear
____ Dispirited
____ Moody
____ Pleased
____ Dead
____ Sorrowful
____ Bleak
____ Light
____ Morbid
____ Heavy-hearted
____ Easy-going
____ Gray
____ Melancholy
____ Hopeful
____ Mashed
____ Unlucky

APPENDIX B

FAN LEVEL SENTENCES

1:1

The executive cut the apple into six pieces.

The writer put down a two-month security deposit.

The pharmacist took the car for a short test drive.

2:2

The doctor nervously watched the tightrope walker.

The minister ran at least four miles a day.

The teacher found a spot to sunbathe at the beach.

2:3

The doctor arrived at the train station early.

The minister decided to play chess with a friend.

The teacher got change from the laundry attendant.

3:2

The judge nervously watched the tightrope walker.

The anchorman ran at least four miles a day.

The clerk found a spot to sunbathe at the beach.

Continued next page.

FAN LEVEL SENTENCES

3:3

The judge decided to play chess with a friend.

The anchorman got change from the laundry attendant.

The clerk arrived at the train station early.

The judge got change from the laundry attendant.

The anchorman arrived at the train station early.

The clerk decided to play chess with a friend.

APPENDIX C

MOOD INDUCTION STIMULI

Sad (Seibert and Ellis's, 1991b)

1. I feel a little down today.
2. My life is harder than I expected.
3. Everyone else seems to be having more fun.
4. Sometimes I feel so guilty that I can't sleep.
5. I wish I could be myself, but nobody likes me when I am.
6. Today is one of those days when everything I do is wrong.
7. I doubt that I'll ever make a contribution to the world.
8. I feel like my life is in a rut that I'm never going to get out of.
9. My mistakes haunt me, I've made too many.
10. Life is such a heavy burden.
11. I'm tired of trying.
12. Even when I give by best effort, it just doesn't seem to be good enough.
13. Nobody understands me or even tries to.
14. I don't think things are ever going to get better.
15. I feel worthless.
16. What's the point of trying?
17. My family doesn't know who I am.
18. When I talk no one really listens.
19. Why should I try when I can't make a difference anyway?
20. Sometimes I feel really guilty about the way I've treated my family.
21. Every time I turn around, something else has gone wrong.
22. I'm completely alone.
23. There is no hope.
24. I feel I am being suffocated by the weight of my past mistakes.

Neutral (Seibert and Ellis's, 1991b)

1. There are sixty minutes in one hour.
2. A neuron fires rapidly.
3. New Mexico is in the United States.
4. Apples are harvested in the Fall.
5. Basket weaving was invented before pottery making.
6. Some baseball bats are made from the wood of the ash tree.
7. The Shakers invented the circular saw.

Mood Stimuli cont.

8. It snows in Idaho.
9. Perennials bloom every year.
10. Arizona has both deserts and pine covered mountains.
11. You have to take the ferry to get to the island.
12. Santa Fe is the capital of New Mexico.
12. Elephants carried the supplies.
13. The Pacific Ocean has fish.
14. Most high schools have a band.
15. The rug was made according to an old Navajo pattern.
16. Some think that electricity is the safest form of power.
17. Most oil paintings are done on canvas.
18. Many buildings in Washington were made of marble.
19. Corn is sometimes called maize.
20. An orange is a citrus fruit.
21. Some say that lady bugs are good for the garden.
22. New York City is in New York State.
23. Diamonds really can cut glass.
24. Some chimps have been taught to use sign language.

Happy (Seibert and Ellis's, 1991b)

1. The world is full of opportunities and I'm taking advantage of it.
2. I know if I try I can make things turn out fine.
3. I bet things will go well for the rest of the day.
4. When I have the right attitude, nothing can depress me.
5. Most people like me.
6. I've got some good friends.
7. I can make things happen.
8. My family brags about me to their friends.
9. I know I can get the things I want in life.
10. I feel creative.
11. Nothing can bum me out now.
12. Things look totally awesome.
13. The relationships I have now are the best I've ever had.
14. It doesn't get any better than this.
15. I can make any situation turn out right.
16. I feel completely aware.
17. I'm in charge of my life and I like it that way.
18. Life's a blast, I can't remember when I felt so good.
19. I'm going to have it all!
20. When it comes right down to it, I'm just too cool.
21. I know I can do it; I'm going to seize the day!
22. I'm energized.
23. It's great to be alive!

APPENDIX D

TABLES

Table 2. Summary ANOVA Table of Demographic and Questionnaire Data of All Participants

Source	Effect	F[a]	Hypoth. df	Error df	Sig. of F
Age	Age-group	3778.054	1	195	0.000
	Completion Status	2.420	1	195	0.121
	Age-group * Completion Status	2.427	1	195	0.121
Education level	Age-group	33.088	1	195	0.000
	Completion Status	0.007	1	195	0.932
	Age-group * Completion Status	0.012	1	195	0.912
Health	Age-group	0.073	1	195	0.788
	Completion Status	0.672	1	195	0.413
	Age-group * Completion Status	0.747	1	195	0.388
Medication	Age-group	25.309	1	195	0.000
	Completion Status	0.878	1	195	0.350
	Age-group * Completion Status	0.937	1	195	0.334
GDS-SF	Age-group	0.129	1	195	0.720
	Completion Status	1.270	1	195	0.261
	Age-group * Completion Status	3.297	1	195	0.071
STAI state anxiety	Age-group	0.001	1	195	0.982
	Completion Status	0.041	1	195	0.840
	Age-group * Completion Status	0.812	1	195	0.369
STAI trait anxiety	Age-group	3.611	1	195	0.059
	Completion Status	1.595	1	195	08
	Age-group * Completion Status	2.440	1	195	0.120
Nelson Denny Reading Rate	Age-group	0.010	1	195	0.920
	Completion Status	2.596	1	195	0.109
	Age-group * Completion Status	0.006	1	195	0.939
WAIS-III Vocabulary raw	Age-group	17.022	1	195	0.000
	Completion Status	17.638	1	195	0.000
	Age-group * Completion Status	0.199	1	195	0.656
WAIS-III Vocabulary scaled	Age-group	2.705	1	195	0.102
	Completion Status	15.592	1	195	0.000
	Age-group * Completion Status	0.034	1	195	0.853
Number of Trials completed	Age-group	0.022	1	195	0.881
	Completion Status	3.294	1	195	0.071
	Age-group * Completion Status	4.531	1	195	0.035

a Exact statistic

Table 4. Summary ANOVA Table of Demographic and Questionnaire Data of All Completed Participants

Source	Effect	F[a]	Hypoth. df	Error df	Sig. of F
Age	Age-group	2020.270	1	123	0.000
	Mood-group	0.496	1	123	0.483
	Age-group * Mood-group	0.712	1	123	0.401
Education level	Age-group	25.794	1	123	0.000
	Mood-group	0.103	1	123	0.749
	Age-group * Mood-group	0.103	1	123	0.749
	Age-group * Mood-group	0.103	1	123	0.749
Health	Age-group	0.019	1	123	0.891
	Mood-group	1.869	1	123	0.174
	Mood-group	1.869	1	123	0.174
	Age-group * Mood-group	0.866	1	123	0.354
Medication	Age-group	10.954	1	123	0.001
	Mood-group	0.997	1	123	0.320
	Mood-group	0.997	1	123	0.320
	Age-group * Mood-group	0.037	1	123	0.848
GDS-SF	Age-group	1.148	1	123	0.286
GDS-SF	Age-group	1.148	1	123	0.286
	Mood-group	0.009	1	123	0.923
	Age-group * Mood-group	3.033	1	123	0.396
STAI state anxiety	Age-group	0.288	1	123	0.593
STAI state anxiety	Age-group	0.288	1	123	0.593
	Mood-group	0.001	1	123	0.977
	Age-group * Mood-group	2.219	1	123	0.139
STAI trait anxiety	Age-group	7.038	1	123	0.009
	Mood-group	0.119	1	123	0.730
	Age-group * Mood-group	1.217	1	123	0.272
DACL-Form A	Age-group	3.736	1	123	0.056
	Mood-group	12.905	1	123	0.000
	Age-group * Mood-group	1.809	1	123	0.181
DACL-Form B	Age-group	5.969	1	123	0.016
	Mood-group	0.357	1	123	0.551
	Age-group * Mood-group	1.643	1	123	0.202
Nelson Denny Reading Rate	Age-group	0.000	1	123	0.988
	Mood-group	0.058	1	123	0.809
	Age-group * Mood-group	0.694	1	123	0.406
WAIS-III Vocabulary raw	Age-group	8.138	1	123	0.005
	Mood-group	0.217	1	123	0.643
	Age-group * Mood-group	4.836	1	123	0.030
WAIS-III Vocabulary scaled	Age-group	1.094	1	123	0.298
	Mood-group	0.148	1	123	0.701
	Age-group * Mood-group	5.242	1	123	0.024
Number of Trials completed	Age-group	3.428	1	123	0.066
	Mood-group	0.539	1	123	0.464
	Age-group * Mood-group	0.072	1	123	0.790

a Exact statistic

Table 5. Pearson Product Moment Correlations of All Variables Including Both Younger and Older Completed Participants

Factors	Statistic	Age-group	Age	Gender	Education Level	Self-rated Health	Number of Medications	GDS-SF
Age-group	Pearson r	1.000	-0.972	0.124	-0.435	0.041	-0.269	0.108
	Sig. (2-tailed)	--	0.000	0.164	0.000	0.646	0.002	0.229
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
Age	Pearson r	-0.972	1.000	-0.140	0.483	-0.023	0.273	-0.040
	Sig. (2-tailed)	0.000	--	0.116	0.000	0.794	0.002	0.658
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
Gender	Pearson r	0.124	-0.140	1.000	-0.177	0.166	0.104	0.147
	Sig. (2-tailed)	0.164	0.116	--	0.046	0.063	0.244	0.098
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
Education Level	Pearson r	-0.435	0.483	-0.177	1.000	-0.062	0.293	0.001
	Sig. (2-tailed)	0.000	0.000	0.046	--	0.487	0.001	0.989
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
Self-rated Health	Pearson r	0.041	-0.023	0.166	-0.062	1.000	0.405	0.383
	Sig. (2-tailed)	0.646	0.794	0.063	0.487	--	0.000	0.000
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
Number of Medications	Pearson r	-0.269	0.273	0.104	0.293	0.405	1.000	0.113
	Sig. (2-tailed)	0.002	0.002	0.244	0.001	0.000	--	0.205
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
GDS-SF	Pearson r	0.108	-0.040	0.147	0.001	0.383	0.113	1.000
	Sig. (2-tailed)	0.229	0.658	0.098	0.989	0.000	0.205	--
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
STAI state anxiety	Pearson r	0.060	-0.038	0.148	-0.049	0.378	0.087	0.567
	Sig. (2-tailed)	0.506	0.675	0.096	0.587	0.000	0.332	0.000
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
STAI trait anxiety	Pearson r	0.253	-0.214	0.186	-0.064	0.259	0.018	0.597
	Sig. (2-tailed)	0.004	0.016	0.036	0.473	0.003	0.842	0.000
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
Reading Rate	Pearson r	0.002	0.009	0.020	0.068	0.061	0.047	-0.030
	Sig. (2-tailed)	0.986	0.916	0.822	0.450	0.497	0.597	0.737
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
WAIS-III Vocab. (raw)	Pearson r	-0.256	0.302	-0.097	0.278	-0.101	0.054	0.041
	Sig. (2-tailed)	0.004	0.001	0.277	0.002	0.260	0.543	0.647
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
WAIS-III Vocab. (scaled)	Pearson r	-0.101	0.145	-0.054	0.193	-0.076	0.032	0.003
	Sig. (2-tailed)	0.256	0.104	0.550	0.030	0.394	0.719	0.976
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
Number of Trials	Pearson r	-0.186	0.237	-0.049	0.217	-0.005	0.012	0.052
	Sig. (2-tailed)	0.036	0.007	0.584	0.014	0.954	0.891	0.563
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
Mood-group	Pearson r	0.245	-0.231	0.032	-0.150	0.101	0.039	0.077
	Sig. (2-tailed)	0.006	0.009	0.719	0.093	0.260	0.662	0.387
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000

Table 5. cont.

Factors	Statistic	Age-group	Age	Gender	Education Level	Self-rated Health	Number of Medications	GDS-SF
DACL-A	Pearson r	0.250	-0.211	0.021	-0.118	0.172	-0.019	0.316
	Sig. (2-tailed)	0.005	0.017	0.817	0.185	0.053	0.831	0.000
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
DACL-B	Pearson r	0.242	-0.205	0.019	-0.080	0.086	0.006	0.410
	Sig. (2-tailed)	0.006	0.021	0.836	0.373	0.339	0.950	0.000
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
RT of Fact 1-1	Pearson r	-0.362	0.378	-0.145	0.141	0.091	0.106	0.019
	Sig. (2-tailed)	0.000	0.000	0.103	0.113	0.308	0.238	0.832
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
RT of Fact 2-2	Pearson r	-0.363	0.402	-0.226	0.155	0.068	0.075	0.042
	Sig. (2-tailed)	0.000	0.000	0.011	0.081	0.447	0.399	0.638
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
RT of Fact 3-3	Pearson r	-0.276	0.299	-0.170	0.084	0.043	-0.020	0.044
	Sig. (2-tailed)	0.002	0.001	0.057	0.349	0.629	0.821	0.626
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
RT of Foil 1-1	Pearson r	-0.413	0.436	-0.175	0.148	0.067	0.086	-0.016
	Sig. (2-tailed)	0.000	0.000	0.049	0.097	0.456	0.335	0.862
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
RT of Foil 2-2	Pearson r	-0.389	0.399	-0.214	0.132	0.041	0.101	-0.067
	Sig. (2-tailed)	0.000	0.000	0.016	0.138	0.643	0.260	0.456
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
RT of Foil 3-3	Pearson r	-0.361	0.377	-0.128	0.144	0.100	0.054	0.102
	Sig. (2-tailed)	0.000	0.000	0.153	0.107	0.263	0.543	0.252
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
RT Mean of all Fact	Pearson r	-0.352	0.379	-0.191	0.133	0.070	0.053	0.038
	Sig. (2-tailed)	0.000	0.000	0.031	0.138	0.431	0.554	0.674
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
RT Mean of all Foil	Pearson r	-0.427	0.445	-0.186	0.157	0.081	0.086	0.020
	Sig. (2-tailed)	0.000	0.000	0.037	0.077	0.365	0.336	0.824
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
RT Mean of all Fan 1-1	Pearson r	-0.401	0.421	-0.166	0.149	0.081	0.099	0.001
	Sig. (2-tailed)	0.000	0.000	0.062	0.094	0.363	0.269	0.987
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
RT Mean of all Fan 2-2	Pearson r	-0.391	0.415	-0.228	0.149	0.056	0.092	-0.015
	Sig. (2-tailed)	0.000	0.000	0.010	0.095	0.530	0.304	0.866
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
RT Mean of all Fan 3-3	Pearson r	-0.344	0.365	-0.155	0.125	0.080	0.023	0.082
	Sig. (2-tailed)	0.000	0.000	0.082	0.161	0.371	0.795	0.361
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
Mean of All RT	Pearson r	-0.399	0.422	-0.192	0.148	0.077	0.072	0.029
	Sig. (2-tailed)	0.000	0.000	0.031	0.096	0.387	0.424	0.747
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000

Table 5. cont.

Factors	Statistic	Age-group	Age	Gender	Education Level	Self-rated Health	Number of Medications	GDS-SF
NC of Fact 1-1	Pearson r	0.112	-0.113	0.058	-0.059	0.082	-0.041	0.049
	Sig. (2-tailed)	0.212	0.205	0.521	0.513	0.362	0.651	0.582
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
NC of Fact 2-2	Pearson r	0.116	-0.094	-0.004	-0.058	-0.035	-0.042	0.089
	Sig. (2-tailed)	0.193	0.292	0.966	0.520	0.699	0.639	0.321
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
NC of Fact 3-3	Pearson r	0.267	-0.249	0.067	-0.028	-0.020	0.010	0.078
	Sig. (2-tailed)	0.002	0.005	0.455	0.758	0.827	0.907	0.385
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
NC of Foil 1-1	Pearson r	0.120	-0.136	0.124	-0.124	-0.077	-0.104	0.030
	Sig. (2-tailed)	0.179	0.129	0.166	0.165	0.391	0.246	0.737
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
NC of Foil 2-2	Pearson r	0.237	-0.248	0.155	0.003	-0.038	-0.053	0.042
	Sig. (2-tailed)	0.007	0.005	0.082	0.972	0.675	0.552	0.642
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
NC of Foil 3-3	Pearson r	0.344	-0.345	0.033	-0.057	-0.089	-0.088	0.004
	Sig. (2-tailed)	0.000	0.000	0.712	0.522	0.319	0.324	0.963
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
NC Mean of all Fact	Pearson r	0.258	-0.237	0.061	-0.057	-0.002	-0.020	0.099
	Sig. (2-tailed)	0.003	0.007	0.493	0.528	0.983	0.827	0.266
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
NC Mean of all Foil	Pearson r	0.340	-0.349	0.103	-0.074	-0.094	-0.106	0.023
	Sig. (2-tailed)	0.000	0.000	0.251	0.407	0.291	0.236	0.794
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
NC Mean of all Fan 1-1	Pearson r	0.135	-0.147	0.115	-0.116	-0.023	-0.093	0.043
	Sig. (2-tailed)	0.132	0.100	0.198	0.195	0.796	0.297	0.635
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
NC Mean of all Fan 2-2	Pearson r	0.220	-0.217	0.106	-0.025	-0.042	-0.057	0.071
	Sig. (2-tailed)	0.013	0.014	0.234	0.781	0.635	0.526	0.429
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
NC Mean of all Fan 3-3	Pearson r	0.380	-0.374	0.054	-0.056	-0.078	-0.064	0.036
	Sig. (2-tailed)	0.000	0.000	0.548	0.530	0.385	0.472	0.689
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
Mean of All NC	Pearson r	0.352	-0.350	0.100	-0.077	-0.070	-0.085	0.057
	Sig. (2-tailed)	0.000	0.000	0.265	0.390	0.434	0.339	0.527
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000

Table 5. cont.

Factors	Statistic	STAI state anxiety	STAI trait anxiety	Reading Rate	WAIS-III Vocab. (raw)	WAIS-III Vocab. (scaled)	Number of Trials	Mood-group
Age-group	Pearson r	0.060	0.253	0.002	-0.256	-0.101	-0.186	0.245
	Sig. (2-tailed)	0.506	0.004	0.986	0.004	0.256	0.036	0.006
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
Age	Pearson r	-0.038	-0.214	0.009	0.302	0.145	0.237	-0.231
	Sig. (2-tailed)	0.675	0.016	0.916	0.001	0.104	0.007	0.009
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
Gender	Pearson r	0.148	0.186	0.020	-0.097	-0.054	-0.049	0.032
	Sig. (2-tailed)	0.096	0.036	0.822	0.277	0.550	0.584	0.719
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
Education Level	Pearson r	-0.049	-0.064	0.068	0.278	0.193	0.217	-0.150
	Sig. (2-tailed)	0.587	0.473	0.450	0.002	0.030	0.014	0.093
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
Self-rated Health	Pearson r	0.378	0.259	0.061	-0.101	-0.076	-0.005	0.101
	Sig. (2-tailed)	0.000	0.003	0.497	0.260	0.394	0.954	0.260
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
Number of Medications	Pearson r	0.087	0.018	0.047	0.054	0.032	0.012	0.039
	Sig. (2-tailed)	0.332	0.842	0.597	0.543	0.719	0.891	0.662
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
GDS-SF	Pearson r	0.567	0.597	-0.030	0.041	0.003	0.052	0.077
	Sig. (2-tailed)	0.000	0.000	0.737	0.647	0.976	0.563	0.387
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
STAI state anxiety	Pearson r	1.000	0.688	0.156	-0.008	-0.042	-0.064	0.084
	Sig. (2-tailed)	--	0.000	0.079	0.933	0.639	0.477	0.347
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
STAI trait anxiety	Pearson r	0.688	1.000	0.186	-0.029	-0.013	0.091	0.147
	Sig. (2-tailed)	0.000	--	0.037	0.743	0.883	0.307	0.098
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
Reading Rate	Pearson r	0.156	0.186	1.000	0.330	0.316	0.203	-0.016
	Sig. (2-tailed)	0.079	0.037	--	0.000	0.000	0.022	0.855
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
WAIS-III Vocab. (raw)	Pearson r	-0.008	-0.029	0.330	1.000	0.958	-0.066	-0.121
	Sig. (2-tailed)	0.933	0.743	0.000	--	0.000	0.463	0.176
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
WAIS-III Vocab. (scaled)	Pearson r	-0.042	-0.013	0.316	0.958	1.000	-0.116	-0.097
	Sig. (2-tailed)	0.639	0.883	0.000	0.000	--	0.196	0.278
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
Number of Trials	Pearson r	-0.064	0.091	0.203	-0.066	-0.116	1.000	-0.105
	Sig. (2-tailed)	0.477	0.307	0.022	0.463	0.196	--	0.241
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
Mood-group	Pearson r	0.084	0.147	-0.016	-0.121	-0.097	-0.105	1.000
	Sig. (2-tailed)	0.347	0.098	0.855	0.176	0.278	0.241	--
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
DACL-A	Pearson r	0.388	0.398	-0.033	-0.028	-0.037	-0.114	0.437
	Sig. (2-tailed)	0.000	0.000	0.711	0.757	0.676	0.203	0.000
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000

Table 5. cont.

Factors	Statistic	STAI state anxiety	STAI trait anxiety	Reading Rate	WAIS-III Vocab. (raw)	WAIS-III Vocab. (scaled)	Number of Trials	Mood-group
DACL-B	Pearson r	0.394	0.478	0.019	-0.053	-0.065	0.108	0.177
	Sig. (2-tailed)	0.000	0.000	0.831	0.551	0.468	0.226	0.047
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
RT of Fact 1-1	Pearson r	-0.034	-0.039	-0.264	-0.270	-0.310	0.086	-0.050
	Sig. (2-tailed)	0.701	0.665	0.003	0.002	0.000	0.338	0.574
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
RT of Fact 2-2	Pearson r	0.009	-0.043	-0.187	-0.170	-0.218	0.125	-0.059
	Sig. (2-tailed)	0.921	0.634	0.035	0.056	0.014	0.161	0.509
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
RT of Fact 3-3	Pearson r	0.036	0.002	-0.246	-0.206	-0.250	0.134	-0.032
	Sig. (2-tailed)	0.692	0.986	0.005	0.020	0.005	0.134	0.717
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
RT of Foil 1-1	Pearson r	0.022	-0.054	-0.206	-0.221	-0.285	0.109	-0.103
	Sig. (2-tailed)	0.804	0.545	0.020	0.013	0.001	0.223	0.250
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
RT of Foil 2-2	Pearson r	-0.029	-0.124	-0.167	-0.231	-0.291	0.090	-0.060
	Sig. (2-tailed)	0.748	0.164	0.061	0.009	0.001	0.316	0.500
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
RT of Foil 3-3	Pearson r	0.069	-0.047	-0.254	-0.114	-0.175	0.099	-0.067
	Sig. (2-tailed)	0.442	0.600	0.004	0.200	0.049	0.270	0.452
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
RT Mean of all Fact	Pearson r	0.005	-0.027	-0.248	-0.229	-0.275	0.123	-0.050
	Sig. (2-tailed)	0.952	0.765	0.005	0.010	0.002	0.168	0.580
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
RT Mean of all Foil	Pearson r	0.029	-0.080	-0.238	-0.200	-0.269	0.110	-0.084
	Sig. (2-tailed)	0.745	0.369	0.007	0.024	0.002	0.219	0.349
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
RT Mean of all Fan 1-1	Pearson r	-0.006	-0.048	-0.242	-0.253	-0.307	0.101	-0.080
	Sig. (2-tailed)	0.949	0.590	0.006	0.004	0.000	0.259	0.373
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
RT Mean of all Fan 2-2	Pearson r	-0.011	-0.088	-0.183	-0.209	-0.266	0.111	-0.062
	Sig. (2-tailed)	0.901	0.324	0.039	0.018	0.003	0.216	0.488
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
RT Mean of all Fan 3-3	Pearson r	0.058	-0.027	-0.266	-0.164	-0.221	0.121	-0.055
	Sig. (2-tailed)	0.519	0.759	0.003	0.065	0.013	0.175	0.536
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
Mean of All RT	Pearson r	0.018	-0.056	-0.247	-0.218	-0.277	0.118	-0.069
	Sig. (2-tailed)	0.840	0.533	0.005	0.014	0.002	0.185	0.442
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
NC of Fact 1-1	Pearson r	-0.008	-0.076	-0.047	0.009	-0.005	-0.173	0.111
	Sig. (2-tailed)	0.926	0.397	0.602	0.923	0.953	0.052	0.213
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
NC of Fact 2-2	Pearson r	-0.060	0.084	-0.020	0.062	0.084	-0.059	-0.038
	Sig. (2-tailed)	0.503	0.349	0.823	0.490	0.347	0.512	0.669
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000

Table 5. cont.

Factors	Statistic	STAI state anxiety	STAI trait anxiety	Reading Rate	WAIS-III Vocab. (raw)	WAIS-III Vocab. (scaled)	Number of Trials	Mood-group
NC of Fact 3-3	Pearson r	-0.045	0.077	0.154	0.191	0.237	-0.103	0.063
	Sig. (2-tailed)	0.619	0.387	0.083	0.031	0.007	0.248	0.484
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
NC of Foil 1-1	Pearson r	-0.048	0.080	-0.046	0.170	0.183	-0.172	0.113
	Sig. (2-tailed)	0.591	0.373	0.608	0.056	0.039	0.054	0.206
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
NC of Foil 2-2	Pearson r	-0.030	0.060	-0.018	0.103	0.129	-0.136	0.037
	Sig. (2-tailed)	0.737	0.501	0.838	0.251	0.148	0.128	0.680
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
NC of Foil 3-3	Pearson r	-0.083	0.081	0.013	0.014	0.045	0.043	-0.124
	Sig. (2-tailed)	0.354	0.365	0.884	0.877	0.617	0.627	0.165
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
NC Mean of all Fact	Pearson r	-0.054	0.061	0.085	0.156	0.191	-0.143	0.062
	Sig. (2-tailed)	0.544	0.498	0.340	0.080	0.031	0.110	0.488
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
NC Mean of all Foil	Pearson r	-0.080	0.096	-0.009	0.088	0.120	-0.058	-0.043
	Sig. (2-tailed)	0.372	0.282	0.917	0.327	0.178	0.520	0.631
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
NC Mean of all Fan 1-1	Pearson r	-0.039	0.028	-0.053	0.129	0.133	-0.198	0.129
	Sig. (2-tailed)	0.663	0.757	0.553	0.147	0.135	0.026	0.148
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
NC Mean of all Fan 2-2	Pearson r	-0.049	0.081	-0.022	0.101	0.129	-0.122	0.008
	Sig. (2-tailed)	0.583	0.363	0.804	0.261	0.147	0.171	0.931
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
NC Mean of all Fan 3-3	Pearson r	-0.083	0.096	0.075	0.091	0.134	-0.009	-0.070
	Sig. (2-tailed)	0.351	0.285	0.402	0.309	0.132	0.916	0.432
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
Mean of All NC	Pearson r	-0.080	0.095	0.027	0.126	0.164	-0.099	-0.007
	Sig. (2-tailed)	0.370	0.290	0.762	0.157	0.065	0.269	0.939
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000

Table 5. cont.

Factors	Statistic	DACL-A	DACL-B	RT of Fact 1-1	RT of Fact 2-2	RT of Fact 3-3	RT of Foil 1-1	RT of Foil 2-2
Age-group	Pearson r	0.250	0.242	-0.362	-0.363	-0.276	-0.413	-0.389
	Sig. (2-tailed)	0.005	0.006	0.000	0.000	0.002	0.000	0.000
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
Age	Pearson r	-0.211	-0.205	0.378	0.402	0.299	0.436	0.399
	Sig. (2-tailed)	0.017	0.021	0.000	0.000	0.001	0.000	0.000
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
Gender	Pearson r	0.021	0.019	-0.145	-0.226	-0.170	-0.175	-0.214
	Sig. (2-tailed)	0.817	0.836	0.103	0.011	0.057	0.049	0.016
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
Education Level	Pearson r	-0.118	-0.080	0.141	0.155	0.084	0.148	0.132
	Sig. (2-tailed)	0.185	0.373	0.113	0.081	0.349	0.097	0.138
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
Self-rated Health	Pearson r	0.172	0.086	0.091	0.068	0.043	0.067	0.041
	Sig. (2-tailed)	0.053	0.339	0.308	0.447	0.629	0.456	0.643
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
Number of Medications	Pearson r	-0.019	0.006	0.106	0.075	-0.020	0.086	0.101
	Sig. (2-tailed)	0.831	0.950	0.238	0.399	0.821	0.335	0.260
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
GDS-SF	Pearson r	0.316	0.410	0.019	0.042	0.044	-0.016	-0.067
	Sig. (2-tailed)	0.000	0.000	0.832	0.638	0.626	0.862	0.456
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
STAI state anxiety	Pearson r	0.388	0.394	-0.034	0.009	0.036	0.022	-0.029
	Sig. (2-tailed)	0.000	0.000	0.701	0.921	0.692	0.804	0.748
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
STAI trait anxiety	Pearson r	0.398	0.478	-0.039	-0.043	0.002	-0.054	-0.124
	Sig. (2-tailed)	0.000	0.000	0.665	0.634	0.986	0.545	0.164
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
Reading Rate	Pearson r	-0.033	0.019	-0.264	-0.187	-0.246	-0.206	-0.167
	Sig. (2-tailed)	0.711	0.831	0.003	0.035	0.005	0.020	0.061
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
WAIS-III Vocab. (raw)	Pearson r	-0.028	-0.053	-0.270	-0.170	-0.206	-0.221	-0.231
	Sig. (2-tailed)	0.757	0.551	0.002	0.056	0.020	0.013	0.009
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
WAIS-III Vocab. (scaled)	Pearson r	-0.037	-0.065	-0.310	-0.218	-0.250	-0.285	-0.291
	Sig. (2-tailed)	0.676	0.468	0.000	0.014	0.005	0.001	0.001
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
Number of Trials	Pearson r	-0.114	0.108	0.086	0.125	0.134	0.109	0.090
	Sig. (2-tailed)	0.203	0.226	0.338	0.161	0.134	0.223	0.316
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
Mood-group	Pearson r	0.437	0.177	-0.050	-0.059	-0.032	-0.103	-0.060
	Sig. (2-tailed)	0.000	0.047	0.574	0.509	0.717	0.250	0.500
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
DACL-A	Pearson r	1.000	0.562	-0.085	-0.055	0.005	-0.084	-0.068
	Sig. (2-tailed)	--	0.000	0.340	0.542	0.958	0.348	0.448
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000

Table 5. cont.

Factors	Statistic	DACL-A	DACL-B	RT of Fact 1-1	RT of Fact 2-2	RT of Fact 3-3	RT of Foil 1-1	RT of Foil 2-2
DACL-B	Pearson r	0.562	1.000	-0.088	-0.083	-0.031	-0.091	-0.137
	Sig. (2-tailed)	0.000	--	0.325	0.356	0.730	0.311	0.124
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
RT of Fact 1-1	Pearson r	-0.085	-0.088	1.000	0.808	0.816	0.871	0.811
	Sig. (2-tailed)	0.340	0.325	--	0.000	0.000	0.000	0.000
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
RT of Fact 2-2	Pearson r	-0.055	-0.083	0.808	1.000	0.851	0.838	0.857
	Sig. (2-tailed)	0.542	0.356	0.000	--	0.000	0.000	0.000
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
RT of Fact 3-3	Pearson r	0.005	-0.031	0.816	0.851	1.000	0.816	0.783
	Sig. (2-tailed)	0.958	0.730	0.000	0.000	--	0.000	0.000
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
RT of Foil 1-1	Pearson r	-0.084	-0.091	0.871	0.838	0.816	1.000	0.825
	Sig. (2-tailed)	0.348	0.311	0.000	0.000	0.000	--	0.000
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
RT of Foil 2-2	Pearson r	-0.068	-0.137	0.811	0.857	0.783	0.825	1.000
	Sig. (2-tailed)	0.448	0.124	0.000	0.000	0.000	0.000	--
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
RT of Foil 3-3	Pearson r	0.066	0.019	0.675	0.715	0.768	0.695	0.643
	Sig. (2-tailed)	0.464	0.830	0.000	0.000	0.000	0.000	0.000
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
RT Mean of all Fact	Pearson r	-0.045	-0.070	0.927	0.941	0.951	0.894	0.867
	Sig. (2-tailed)	0.614	0.437	0.000	0.000	0.000	0.000	0.000
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
RT Mean of all Foil	Pearson r	-0.019	-0.066	0.858	0.881	0.874	0.913	0.892
	Sig. (2-tailed)	0.831	0.462	0.000	0.000	0.000	0.000	0.000
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
RT Mean of all Fan 1-1	Pearson r	-0.087	-0.092	0.966	0.851	0.844	0.969	0.845
	Sig. (2-tailed)	0.328	0.302	0.000	0.000	0.000	0.000	0.000
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
RT Mean of all Fan 2-2	Pearson r	-0.064	-0.115	0.840	0.961	0.846	0.862	0.967
	Sig. (2-tailed)	0.476	0.197	0.000	0.000	0.000	0.000	0.000
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
RT Mean of all Fan 3-3	Pearson r	0.042	-0.003	0.782	0.823	0.923	0.794	0.748
	Sig. (2-tailed)	0.642	0.975	0.000	0.000	0.000	0.000	0.000
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
Mean of All RT	Pearson r	-0.032	-0.069	0.908	0.927	0.928	0.921	0.897
	Sig. (2-tailed)	0.720	0.442	0.000	0.000	0.000	0.000	0.000
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
NC of Fact 1-1	Pearson r	0.038	0.036	0.008	0.091	0.150	-0.027	0.019
	Sig. (2-tailed)	0.669	0.691	0.926	0.309	0.092	0.764	0.833
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
NC of Fact 2-2	Pearson r	0.142	0.126	0.052	0.049	0.085	0.041	-0.075
	Sig. (2-tailed)	0.110	0.158	0.562	0.588	0.344	0.649	0.400
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000

Table 5. cont.

Factors	Statistic	DACL-A	DACL-B	RT of Fact 1-1	RT of Fact 2-2	RT of Fact 3-3	RT of Foil 1-1	RT of Foil 2-2
NC of Fact 3-3	Pearson r	0.062	0.055	-0.220	-0.244	-0.232	-0.361	-0.241
	Sig. (2-tailed)	0.488	0.541	0.013	0.006	0.009	0.000	0.006
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
NC of Foil 1-1	Pearson r	0.081	0.092	-0.056	-0.047	0.036	-0.110	-0.163
	Sig. (2-tailed)	0.366	0.304	0.535	0.598	0.684	0.216	0.068
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
NC of Foil 2-2	Pearson r	0.075	0.075	-0.155	-0.195	-0.085	-0.214	-0.298
	Sig. (2-tailed)	0.399	0.405	0.082	0.028	0.340	0.016	0.001
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
NC of Foil 3-3	Pearson r	0.064	0.039	-0.231	-0.137	-0.122	-0.231	-0.296
	Sig. (2-tailed)	0.475	0.664	0.009	0.123	0.171	0.009	0.001
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
NC Mean of all Fact	Pearson r	0.105	0.093	-0.131	-0.124	-0.085	-0.241	-0.187
	Sig. (2-tailed)	0.242	0.300	0.143	0.165	0.340	0.006	0.036
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
NC Mean of all Foil	Pearson r	0.089	0.075	-0.220	-0.164	-0.099	-0.253	-0.333
	Sig. (2-tailed)	0.320	0.405	0.013	0.065	0.270	0.004	0.000
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
NC Mean of all Fan 1-1	Pearson r	0.075	0.083	-0.038	0.002	0.089	-0.093	-0.112
	Sig. (2-tailed)	0.399	0.356	0.674	0.978	0.321	0.300	0.208
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
NC Mean of all Fan 2-2	Pearson r	0.120	0.111	-0.084	-0.113	-0.020	-0.130	-0.243
	Sig. (2-tailed)	0.181	0.214	0.350	0.206	0.826	0.145	0.006
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
NC Mean of all Fan 3-3	Pearson r	0.076	0.053	-0.273	-0.210	-0.193	-0.331	-0.327
	Sig. (2-tailed)	0.396	0.552	0.002	0.018	0.030	0.000	0.000
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
Mean of All NC	Pearson r	0.107	0.092	-0.214	-0.170	-0.106	-0.281	-0.318
	Sig. (2-tailed)	0.232	0.306	0.016	0.056	0.234	0.001	0.000
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000

Table 5. cont.

Factors	Statistic	RT of Foil 3-3	RT Mean of all Fact	RT Mean of all Foil	RT Mean of all Fan 1-1	RT Mean of all Fan 2-2	RT Mean of all Fan 3-3	Mean of All RT
Age-group	Pearson r	-0.361	-0.352	-0.427	-0.401	-0.391	-0.344	-0.399
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
Age	Pearson r	0.377	0.379	0.445	0.421	0.415	0.365	0.422
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
Gender	Pearson r	-0.128	-0.191	-0.186	-0.166	-0.228	-0.155	-0.192
	Sig. (2-tailed)	0.153	0.031	0.037	0.062	0.010	0.082	0.031
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
Education Level	Pearson r	0.144	0.133	0.157	0.149	0.149	0.125	0.148
	Sig. (2-tailed)	0.107	0.138	0.077	0.094	0.095	0.161	0.096
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
Self-rated Health	Pearson r	0.100	0.070	0.081	0.081	0.056	0.080	0.077
	Sig. (2-tailed)	0.263	0.431	0.365	0.363	0.530	0.371	0.387
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
Number of Medications	Pearson r	0.054	0.053	0.086	0.099	0.092	0.023	0.072
	Sig. (2-tailed)	0.543	0.554	0.336	0.269	0.304	0.795	0.424
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
GDS-SF	Pearson r	0.102	0.038	0.020	0.001	-0.015	0.082	0.029
	Sig. (2-tailed)	0.252	0.674	0.824	0.987	0.866	0.361	0.747
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
STAI state Anxiety	Pearson r	0.069	0.005	0.029	-0.006	-0.011	0.058	0.018
	Sig. (2-tailed)	0.442	0.952	0.745	0.949	0.901	0.519	0.840
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
STAI trait Anxiety	Pearson r	-0.047	-0.027	-0.080	-0.048	-0.088	-0.027	-0.056
	Sig. (2-tailed)	0.600	0.765	0.369	0.590	0.324	0.759	0.533
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
Reading Rate	Pearson r	-0.254	-0.248	-0.238	-0.242	-0.183	-0.266	-0.247
	Sig. (2-tailed)	0.004	0.005	0.007	0.006	0.039	0.003	0.005
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
WAIS-III Vocab. (raw)	Pearson r	-0.114	-0.229	-0.200	-0.253	-0.209	-0.164	-0.218
	Sig. (2-tailed)	0.200	0.010	0.024	0.004	0.018	0.065	0.014
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
WAIS-III Vocab. (scaled)	Pearson r	-0.175	-0.275	-0.269	-0.307	-0.266	-0.221	-0.277
	Sig. (2-tailed)	0.049	0.002	0.002	0.000	0.003	0.013	0.002
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
Number of Trials	Pearson r	0.099	0.123	0.110	0.101	0.111	0.121	0.118
	Sig. (2-tailed)	0.270	0.168	0.219	0.259	0.216	0.175	0.185
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
Mood-group	Pearson r	-0.067	-0.050	-0.084	-0.080	-0.062	-0.055	-0.069
	Sig. (2-tailed)	0.452	0.580	0.349	0.373	0.488	0.536	0.442
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
DACL-A	Pearson r	0.066	-0.045	-0.019	-0.087	-0.064	0.042	-0.032
	Sig. (2-tailed)	0.464	0.614	0.831	0.328	0.476	0.642	0.720
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000

Table 5. cont.

Factors	Statistic	RT of Foil 3-3	RT Mean of all Fact	RT Mean of all Foil	RT Mean of all Fan 1-1	RT Mean of all Fan 2-2	RT Mean of all Fan 3-3	Mean of All RT
DACL-B	Pearson r	0.019	-0.070	-0.066	-0.092	-0.115	-0.003	-0.069
	Sig. (2-tailed)	0.830	0.437	0.462	0.302	0.197	0.975	0.442
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
RT of Fact 1-1	Pearson r	0.675	0.927	0.858	0.966	0.840	0.782	0.908
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
RT of Fact 2-2	Pearson r	0.715	0.941	0.881	0.851	0.961	0.823	0.927
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
RT of Fact 3-3	Pearson r	0.768	0.951	0.874	0.844	0.846	0.923	0.928
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
RT of Foil 1-1	Pearson r	0.695	0.894	0.913	0.969	0.862	0.794	0.921
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
RT of Foil 2-2	Pearson r	0.643	0.867	0.892	0.845	0.967	0.748	0.897
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
RT of Foil 3-3	Pearson r	1.000	0.768	0.896	0.708	0.703	0.955	0.850
	Sig. (2-tailed)	--	0.000	0.000	0.000	0.000	0.000	0.000
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
RT Mean of all Fact	Pearson r	0.768	1.000	0.927	0.941	0.937	0.900	0.980
	Sig. (2-tailed)	0.000	--	0.000	0.000	0.000	0.000	0.000
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
RT Mean of all Foil	Pearson r	0.896	0.927	1.000	0.916	0.920	0.942	0.983
	Sig. (2-tailed)	0.000	0.000	--	0.000	0.000	0.000	0.000
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
RT Mean of all Fan 1-1	Pearson r	0.708	0.941	0.916	1.000	0.880	0.815	0.945
	Sig. (2-tailed)	0.000	0.000	0.000	--	0.000	0.000	0.000
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
RT Mean of all Fan 2-2	Pearson r	0.703	0.937	0.920	0.880	1.000	0.813	0.946
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	--	0.000	0.000
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
RT Mean of all Fan 3-3	Pearson r	0.955	0.900	0.942	0.815	0.813	1.000	0.939
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	--	0.000
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
Mean of All RT	Pearson r	0.850	0.980	0.983	0.945	0.946	0.939	1.000
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	0.000	--
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
NC of Fact 1-1	Pearson r	0.179	0.092	0.080	-0.010	0.055	0.177	0.087
	Sig. (2-tailed)	0.045	0.302	0.371	0.911	0.536	0.047	0.328
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
NC of Fact 2-2	Pearson r	0.187	0.067	0.074	0.048	-0.017	0.152	0.072
	Sig. (2-tailed)	0.035	0.455	0.408	0.593	0.854	0.089	0.421
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000

Table 5. cont.

Factors	Statistic	RT of Foil 3-3	RT Mean of all Fact	RT Mean of all Foil	RT Mean of all Fan 1-1	RT Mean of all Fan 2-2	RT Mean of all Fan 3-3	Mean of All RT
NC of Fact 3-3	Pearson r	-0.115	-0.247	-0.247	-0.302	-0.251	-0.176	-0.252
	Sig. (2-tailed)	0.200	0.005	0.005	0.001	0.004	0.048	0.004
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
NC of Foil 1-1	Pearson r	0.054	-0.020	-0.065	-0.086	-0.111	0.049	-0.044
	Sig. (2-tailed)	0.550	0.820	0.469	0.334	0.213	0.585	0.620
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
NC of Foil 2-2	Pearson r	0.030	-0.151	-0.154	-0.191	-0.258	-0.021	-0.155
	Sig. (2-tailed)	0.736	0.090	0.085	0.031	0.003	0.812	0.081
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
NC of Foil 3-3	Pearson r	-0.033	-0.172	-0.185	-0.239	-0.225	-0.076	-0.182
	Sig. (2-tailed)	0.717	0.054	0.037	0.007	0.011	0.396	0.040
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
NC Mean of all Fact	Pearson r	0.040	-0.119	-0.120	-0.193	-0.162	-0.015	-0.122
	Sig. (2-tailed)	0.654	0.183	0.178	0.029	0.068	0.864	0.172
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
NC Mean of all Foil	Pearson r	0.001	-0.168	-0.191	-0.245	-0.262	-0.045	-0.183
	Sig. (2-tailed)	0.988	0.059	0.032	0.005	0.003	0.617	0.039
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
NC Mean of all Fan 1-1	Pearson r	0.113	0.023	-0.015	-0.068	-0.059	0.109	0.003
	Sig. (2-tailed)	0.206	0.799	0.868	0.448	0.507	0.223	0.972
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
NC Mean of all Fan 2-2	Pearson r	0.109	-0.074	-0.072	-0.111	-0.187	0.056	-0.074
	Sig. (2-tailed)	0.222	0.408	0.420	0.214	0.035	0.529	0.405
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
NC Mean of all Fan 3-3	Pearson r	-0.073	-0.237	-0.248	-0.313	-0.281	-0.133	-0.248
	Sig. (2-tailed)	0.412	0.007	0.005	0.000	0.001	0.136	0.005
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
Mean of All NC	Pearson r	0.017	-0.170	-0.188	-0.257	-0.256	-0.039	-0.183
	Sig. (2-tailed)	0.850	0.055	0.035	0.004	0.004	0.664	0.040
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000

Table 5. cont.

Factors	Statistic	NC of Fact 1-1	NC of Fact 2-2	NC of Fact 3-3	NC of Foil 1-1	NC of Foil 2-2	NC of Foil 3-3	NC Mean of all Fact
Age-group	Pearson r	0.112	0.116	0.267	0.120	0.237	0.344	0.258
	Sig. (2-tailed)	0.212	0.193	0.002	0.179	0.007	0.000	0.003
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
Age	Pearson r	-0.113	-0.094	-0.249	-0.136	-0.248	-0.345	-0.237
	Sig. (2-tailed)	0.205	0.292	0.005	0.129	0.005	0.000	0.007
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
Gender	Pearson r	0.058	-0.004	0.067	0.124	0.155	0.033	0.061
	Sig. (2-tailed)	0.521	0.966	0.455	0.166	0.082	0.712	0.493
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
Education Level	Pearson r	-0.059	-0.058	-0.028	-0.124	0.003	-0.057	-0.057
	Sig. (2-tailed)	0.513	0.520	0.758	0.165	0.972	0.522	0.528
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
Self-rated Health	Pearson r	0.082	-0.035	-0.020	-0.077	-0.038	-0.089	-0.002
	Sig. (2-tailed)	0.362	0.699	0.827	0.391	0.675	0.319	0.983
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
Number of Medications	Pearson r	-0.041	-0.042	0.010	-0.104	-0.053	-0.088	-0.020
	Sig. (2-tailed)	0.651	0.639	0.907	0.246	0.552	0.324	0.827
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
GDS-SF	Pearson r	0.049	0.089	0.078	0.030	0.042	0.004	0.099
	Sig. (2-tailed)	0.582	0.321	0.385	0.737	0.642	0.963	0.266
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
STAI state Anxiety	Pearson r	-0.008	-0.060	-0.045	-0.048	-0.030	-0.083	-0.054
	Sig. (2-tailed)	0.926	0.503	0.619	0.591	0.737	0.354	0.544
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
STAI trait Anxiety	Pearson r	-0.076	0.084	0.077	0.080	0.060	0.081	0.061
	Sig. (2-tailed)	0.397	0.349	0.387	0.373	0.501	0.365	0.498
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
Reading Rate	Pearson r	-0.047	-0.020	0.154	-0.046	-0.018	0.013	0.085
	Sig. (2-tailed)	0.602	0.823	0.083	0.608	0.838	0.884	0.340
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
WAIS-III Vocab. (raw)	Pearson r	0.009	0.062	0.191	0.170	0.103	0.014	0.156
	Sig. (2-tailed)	0.923	0.490	0.031	0.056	0.251	0.877	0.080
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
WAIS-III Vocab. (scaled)	Pearson r	-0.005	0.084	0.237	0.183	0.129	0.045	0.191
	Sig. (2-tailed)	0.953	0.347	0.007	0.039	0.148	0.617	0.031
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
Number of Trials	Pearson r	-0.173	-0.059	-0.103	-0.172	-0.136	0.043	-0.143
	Sig. (2-tailed)	0.052	0.512	0.248	0.054	0.128	0.627	0.110
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
Mood-group	Pearson r	0.111	-0.038	0.063	0.113	0.037	-0.124	0.062
	Sig. (2-tailed)	0.213	0.669	0.484	0.205	0.680	0.165	0.488
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
DACL-A	Pearson r	0.038	0.142	0.062	0.081	0.075	0.064	0.105
	Sig. (2-tailed)	0.669	0.110	0.488	0.366	0.399	0.475	0.242
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000

Table 5. cont.

Factors	Statistic	NC of Fact 1-1	NC of Fact 2-2	NC of Fact 3-3	NC of Foil 1-1	NC of Foil 2-2	NC of Foil 3-3	NC Mean of all Fact
DACL-B	Pearson r	0.036	0.126	0.055	0.092	0.075	0.039	0.093
	Sig. (2-tailed)	0.691	0.158	0.541	0.304	0.405	0.664	0.300
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
RT of Fact 1-1	Pearson r	0.008	0.052	-0.220	-0.056	-0.155	-0.231	-0.131
	Sig. (2-tailed)	0.926	0.562	0.013	0.535	0.082	0.009	0.143
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
RT of Fact 2-2	Pearson r	0.091	0.049	-0.244	-0.047	-0.195	-0.137	-0.124
	Sig. (2-tailed)	0.309	0.588	0.006	0.598	0.028	0.123	0.165
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
RT of Fact 3-3	Pearson r	0.150	0.085	-0.232	0.036	-0.085	-0.122	-0.085
	Sig. (2-tailed)	0.092	0.344	0.009	0.684	0.340	0.171	0.340
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
RT of Foil 1-1	Pearson r	-0.027	0.041	-0.361	-0.110	-0.214	-0.231	-0.241
	Sig. (2-tailed)	0.764	0.649	0.000	0.216	0.016	0.009	0.006
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
RT of Foil 2-2	Pearson r	0.019	-0.075	-0.241	-0.163	-0.298	-0.290	-0.187
	Sig. (2-tailed)	0.833	0.400	0.006	0.068	0.001	0.001	0.036
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
RT of Foil 3-3	Pearson r	0.179	0.187	-0.115	0.054	0.030	-0.033	0.040
	Sig. (2-tailed)	0.045	0.035	0.200	0.550	0.736	0.717	0.654
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
RT Mean of all Fact	Pearson r	0.092	0.067	-0.247	-0.020	-0.151	-0.172	-0.119
	Sig. (2-tailed)	0.302	0.455	0.005	0.820	0.090	0.054	0.183
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
RT Mean of all Foil	Pearson r	0.080	0.074	-0.247	-0.065	-0.154	-0.185	-0.120
	Sig. (2-tailed)	0.371	0.408	0.005	0.469	0.085	0.037	0.178
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
RT Mean of all Fan 1-1	Pearson r	-0.010	0.048	-0.302	-0.086	-0.191	-0.239	-0.193
	Sig. (2-tailed)	0.911	0.593	0.001	0.334	0.031	0.007	0.029
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
RT Mean of all Fan 2-2	Pearson r	0.055	-0.017	-0.251	-0.111	-0.258	-0.225	-0.162
	Sig. (2-tailed)	0.536	0.854	0.004	0.213	0.003	0.011	0.068
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
RT Mean of all Fan 3-3	Pearson r	0.177	0.152	-0.176	0.049	-0.021	-0.076	-0.015
	Sig. (2-tailed)	0.047	0.089	0.048	0.585	0.812	0.396	0.864
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
Mean of All RT	Pearson r	0.087	0.072	-0.252	-0.044	-0.155	-0.182	-0.122
	Sig. (2-tailed)	0.328	0.421	0.004	0.620	0.081	0.040	0.172
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
NC of Fact 1-1	Pearson r	1.000	0.374	0.195	0.468	0.343	0.183	0.560
	Sig. (2-tailed)	--	0.000	0.028	0.000	0.000	0.040	0.000
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
NC of Fact 2-2	Pearson r	0.374	1.000	0.326	0.395	0.448	0.310	0.689
	Sig. (2-tailed)	0.000	--	0.000	0.000	0.000	0.000	0.000
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000

Table 5. cont.

Factors	Statistic	NC of Fact 1-1	NC of Fact 2-2	NC of Fact 3-3	NC of Foil 1-1	NC of Foil 2-2	NC of Foil 3-3	NC Mean of all Fact
NC of Fact 3-3	Pearson r	0.195	0.326	1.000	0.189	0.313	0.331	0.860
	Sig. (2-tailed)	0.028	0.000	--	0.033	0.000	0.000	0.000
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
NC of Foil 1-1	Pearson r	0.468	0.395	0.189	1.000	0.563	0.281	0.407
	Sig. (2-tailed)	0.000	0.000	0.033	--	0.000	0.001	0.000
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
NC of Foil 2-2	Pearson r	0.343	0.448	0.313	0.563	1.000	0.384	0.475
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	--	0.000	0.000
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
NC of Foil 3-3	Pearson r	0.183	0.310	0.331	0.281	0.384	1.000	0.391
	Sig. (2-tailed)	0.040	0.000	0.000	0.001	0.000	--	0.000
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
NC Mean of all Fact	Pearson r	0.560	0.689	0.860	0.407	0.475	0.391	1.000
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	0.000	--
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
NC Mean of all Foil	Pearson r	0.359	0.456	0.373	0.642	0.713	0.884	0.523
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
NC Mean of all Fan 1-1	Pearson r	0.757	0.445	0.220	0.932	0.558	0.283	0.531
	Sig. (2-tailed)	0.000	0.000	0.013	0.000	0.000	0.001	0.000
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
NC Mean of all Fan 2-2	Pearson r	0.415	0.782	0.371	0.578	0.908	0.414	0.655
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
NC Mean of all Fan 3-3	Pearson r	0.224	0.378	0.677	0.299	0.431	0.918	0.665
	Sig. (2-tailed)	0.011	0.000	0.000	0.001	0.000	0.000	0.000
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000
Mean of All NC	Pearson r	0.485	0.608	0.615	0.632	0.712	0.803	0.781
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	N	127.000	127.000	127.000	127.000	127.000	127.000	127.000

Table 5. cont.

Factors	Statistic	NC Mean of all Foil	NC Mean of all Fan 1-1	NC Mean of all Fan 2-2	NC Mean of all Fan 3-3	Mean of All NC
Age-group	Pearson r	0.340	0.135	0.220	0.380	0.352
	Sig. (2-tailed)	0.000	0.132	0.013	0.000	0.000
	N	127.000	127.000	127.000	127.000	127.000
Age	Pearson r	-0.349	-0.147	-0.217	-0.374	-0.350
	Sig. (2-tailed)	0.000	0.100	0.014	0.000	0.000
	N	127.000	127.000	127.000	127.000	127.000
Gender	Pearson r	0.103	0.115	0.106	0.054	0.100
	Sig. (2-tailed)	0.251	0.198	0.234	0.548	0.265
	N	127.000	127.000	127.000	127.000	127.000
Education Level	Pearson r	-0.074	-0.116	-0.025	-0.056	-0.077
	Sig. (2-tailed)	0.407	0.195	0.781	0.530	0.390
	N	127.000	127.000	127.000	127.000	127.000
Self-rated Health	Pearson r	-0.094	-0.023	-0.042	-0.078	-0.070
	Sig. (2-tailed)	0.291	0.796	0.635	0.385	0.434
	N	127.000	127.000	127.000	127.000	127.000
Number of Medications	Pearson r	-0.106	-0.093	-0.057	-0.064	-0.085
	Sig. (2-tailed)	0.236	0.297	0.526	0.472	0.339
	N	127.000	127.000	127.000	127.000	127.000
GDS-SF	Pearson r	0.023	0.043	0.071	0.036	0.057
	Sig. (2-tailed)	0.794	0.635	0.429	0.689	0.527
	N	127.000	127.000	127.000	127.000	127.000
STAI state Anxiety	Pearson r	-0.080	-0.039	-0.049	-0.083	-0.080
	Sig. (2-tailed)	0.372	0.663	0.583	0.351	0.370
	N	127.000	127.000	127.000	127.000	127.000
STAI trait Anxiety	Pearson r	0.096	0.028	0.081	0.096	0.095
	Sig. (2-tailed)	0.282	0.757	0.363	0.285	0.290
	N	127.000	127.000	127.000	127.000	127.000
Reading Rate	Pearson r	-0.009	-0.053	-0.022	0.075	0.027
	Sig. (2-tailed)	0.917	0.553	0.804	0.402	0.762
	N	127.000	127.000	127.000	127.000	127.000
WAIS-III Vocab. (raw)	Pearson r	0.088	0.129	0.101	0.091	0.126
	Sig. (2-tailed)	0.327	0.147	0.261	0.309	0.157
	N	127.000	127.000	127.000	127.000	127.000
WAIS-III Vocab. (scaled)	Pearson r	0.120	0.133	0.129	0.134	0.164
	Sig. (2-tailed)	0.178	0.135	0.147	0.132	0.065
	N	127.000	127.000	127.000	127.000	127.000
Number of Trials	Pearson r	-0.058	-0.198	-0.122	-0.009	-0.099
	Sig. (2-tailed)	0.520	0.026	0.171	0.916	0.269
	N	127.000	127.000	127.000	127.000	127.000
Mood-group	Pearson r	-0.043	0.129	0.008	-0.070	-0.007
	Sig. (2-tailed)	0.631	0.148	0.931	0.432	0.939
	N	127.000	127.000	127.000	127.000	127.000
DACL-A	Pearson r	0.089	0.075	0.120	0.076	0.107
	Sig. (2-tailed)	0.320	0.399	0.181	0.396	0.232
	N	127.000	127.000	127.000	127.000	127.000

Table 5. cont.

Factors	Statistic	NC Mean of all Foil	NC Mean of all Fan 1-1	NC Mean of all Fan 2-2	NC Mean of all Fan 3-3	Mean of All NC
DACL-B	Pearson r	0.075	0.083	0.111	0.053	0.092
	Sig. (2-tailed)	0.405	0.356	0.214	0.552	0.306
	N	127.000	127.000	127.000	127.000	127.000
RT of Fact 1-1	Pearson r	-0.220	-0.038	-0.084	-0.273	-0.214
	Sig. (2-tailed)	0.013	0.674	0.350	0.002	0.016
	N	127.000	127.000	127.000	127.000	127.000
RT of Fact 2-2	Pearson r	-0.164	0.002	-0.113	-0.210	-0.170
	Sig. (2-tailed)	0.065	0.978	0.206	0.018	0.056
	N	127.000	127.000	127.000	127.000	127.000
RT of Fact 3-3	Pearson r	-0.099	0.089	-0.020	-0.193	-0.106
	Sig. (2-tailed)	0.270	0.321	0.826	0.030	0.234
	N	127.000	127.000	127.000	127.000	127.000
RT of Foil 1-1	Pearson r	-0.253	-0.093	-0.130	-0.331	-0.281
	Sig. (2-tailed)	0.004	0.300	0.145	0.000	0.001
	N	127.000	127.000	127.000	127.000	127.000
RT of Foil 2-2	Pearson r	-0.333	-0.112	-0.243	-0.327	-0.318
	Sig. (2-tailed)	0.000	0.208	0.006	0.000	0.000
	N	127.000	127.000	127.000	127.000	127.000
RT of Foil 3-3	Pearson r	0.001	0.113	0.109	-0.073	0.017
	Sig. (2-tailed)	0.988	0.206	0.222	0.412	0.850
	N	127.000	127.000	127.000	127.000	127.000
RT Mean of all Fact	Pearson r	-0.168	0.023	-0.074	-0.237	-0.170
	Sig. (2-tailed)	0.059	0.799	0.408	0.007	0.055
	N	127.000	127.000	127.000	127.000	127.000
RT Mean of all Foil	Pearson r	-0.191	-0.015	-0.072	-0.248	-0.188
	Sig. (2-tailed)	0.032	0.868	0.420	0.005	0.035
	N	127.000	127.000	127.000	127.000	127.000
RT Mean of all Fan 1-1	Pearson r	-0.245	-0.068	-0.111	-0.313	-0.257
	Sig. (2-tailed)	0.005	0.448	0.214	0.000	0.004
	N	127.000	127.000	127.000	127.000	127.000
RT Mean of all Fan 2-2	Pearson r	-0.262	-0.059	-0.187	-0.281	-0.256
	Sig. (2-tailed)	0.003	0.507	0.035	0.001	0.004
	N	127.000	127.000	127.000	127.000	127.000
RT Mean of all Fan 3-3	Pearson r	-0.045	0.109	0.056	-0.133	-0.039
	Sig. (2-tailed)	0.617	0.223	0.529	0.136	0.664
	N	127.000	127.000	127.000	127.000	127.000
Mean of All RT	Pearson r	-0.183	0.003	-0.074	-0.248	-0.183
	Sig. (2-tailed)	0.039	0.972	0.405	0.005	0.040
	N	127.000	127.000	127.000	127.000	127.000
NC of Fact 1-1	Pearson r	0.359	0.757	0.415	0.224	0.485
	Sig. (2-tailed)	0.000	0.000	0.000	0.011	0.000
	N	127.000	127.000	127.000	127.000	127.000
NC of Fact 2-2	Pearson r	0.456	0.445	0.782	0.378	0.608
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000
	N	127.000	127.000	127.000	127.000	127.000

Table 5, cont.

Factors	Statistic	NC Mean of all Foil	NC Mean of all Fan 1-1	NC Mean of all Fan 2-2	NC Mean of all Fan 3-3	Mean of All NC
NC of Fact 3-3	Pearson r	0.373	0.220	0.371	0.677	0.615
	Sig. (2-tailed)	0.000	0.013	0.000	0.000	0.000
	N	127.000	127.000	127.000	127.000	127.000
NC of Foil 1-1	Pearson r	0.642	0.932	0.578	0.299	0.632
	Sig. (2-tailed)	0.000	0.000	0.000	0.001	0.000
	N	127.000	127.000	127.000	127.000	127.000
NC of Foil 2-2	Pearson r	0.713	0.558	0.908	0.431	0.712
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000
	N	127.000	127.000	127.000	127.000	127.000
NC of Foil 3-3	Pearson r	0.884	0.283	0.414	0.918	0.803
	Sig. (2-tailed)	0.000	0.001	0.000	0.000	0.000
	N	127.000	127.000	127.000	127.000	127.000
NC Mean of all Fact	Pearson r	0.523	0.531	0.655	0.665	0.781
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000
	N	127.000	127.000	127.000	127.000	127.000
NC Mean of all Foil	Pearson r	1.000	0.622	0.711	0.845	0.941
	Sig. (2-tailed)	--	0.000	0.000	0.000	0.000
	N	127.000	127.000	127.000	127.000	127.000
NC Mean of all Fan 1-1	Pearson r	0.622	1.000	0.598	0.313	0.667
	Sig. (2-tailed)	0.000	--	0.000	0.000	0.000
	N	127.000	127.000	127.000	127.000	127.000
NC Mean of all Fan 2-2	Pearson r	0.711	0.598	1.000	0.478	0.782
	Sig. (2-tailed)	0.000	0.000	--	0.000	0.000
	N	127.000	127.000	127.000	127.000	127.000
NC Mean of all Fan 3-3	Pearson r	0.845	0.313	0.478	1.000	0.884
	Sig. (2-tailed)	0.000	0.000	0.000	--	0.000
	N	127.000	127.000	127.000	127.000	127.000
Mean of All NC	Pearson r	0.941	0.667	0.782	0.884	1.000
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	--
	N	127.000	127.000	127.000	127.000	127.000

Table 6. Pearson Product Moment Correlations of All Variables For Older Completed Participants

Factors	Statistic	Age	Gender	Education Level	Self-rated Health	Number of Medications	GDS-SF	STAI state anxiety
Age	Pearson r	1.000	-0.171	0.171	0.218	0.112	0.160	-0.071
	Sig. (2-tailed)	--	0.367	0.368	0.248	0.557	0.397	0.710
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
Gender	Pearson r	-0.171	1.000	-0.253	-0.012	0.020	0.090	-0.036
	Sig. (2-tailed)	0.367	--	0.177	0.948	0.918	0.635	0.850
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
Education Level	Pearson r	0.171	-0.253	1.000	-0.065	0.346	-0.186	-0.136
	Sig. (2-tailed)	0.368	0.177	--	0.731	0.061	0.326	0.474
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
Self-rated Health	Pearson r	0.218	-0.012	-0.065	1.000	0.512	0.476	0.395
	Sig. (2-tailed)	0.248	0.948	0.731	--	0.004	0.008	0.031
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
Number of Medications	Pearson r	0.112	0.020	0.346	0.512	1.000	0.201	0.156
	Sig. (2-tailed)	0.557	0.918	0.061	0.004	--	0.288	0.411
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
GDS-SF	Pearson r	0.160	0.090	-0.186	0.476	0.201	1.000	0.550
	Sig. (2-tailed)	0.397	0.635	0.326	0.008	0.288	--	0.002
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
STAI state anxiety	Pearson r	-0.071	-0.036	-0.136	0.395	0.156	0.550	1.000
	Sig. (2-tailed)	0.710	0.850	0.474	0.031	0.411	0.002	--
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
STAI trait anxiety	Pearson r	0.075	-0.024	0.041	0.331	0.241	0.248	0.557
	Sig. (2-tailed)	0.692	0.901	0.830	0.074	0.200	0.186	0.001
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
Reading Rate	Pearson r	0.162	0.001	0.080	0.028	-0.152	-0.291	-0.262
	Sig. (2-tailed)	0.393	0.996	0.676	0.883	0.424	0.119	0.162
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
WAIS-III Vocab. (raw)	Pearson r	0.241	0.187	-0.003	-0.082	-0.240	0.036	-0.245
	Sig. (2-tailed)	0.199	0.323	0.989	0.666	0.202	0.849	0.192
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
WAIS-III Vocab. (scaled)	Pearson r	0.302	0.238	-0.017	0.039	-0.156	0.060	-0.193
	Sig. (2-tailed)	0.104	0.204	0.930	0.838	0.409	0.752	0.307
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
Number of Trials	Pearson r	0.371	-0.150	0.200	-0.053	-0.092	-0.197	-0.160
	Sig. (2-tailed)	0.043	0.428	0.289	0.782	0.630	0.296	0.400
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
Mood-group	Pearson r	0.109	-0.226	0.000	0.219	0.073	-0.139	-0.142
	Sig. (2-tailed)	0.565	0.230	1.000	0.246	0.702	0.464	0.455
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
DACL-A	Pearson r	0.218	-0.140	-0.039	0.307	0.042	0.349	0.581
	Sig. (2-tailed)	0.247	0.459	0.838	0.099	0.824	0.059	0.001
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
DACL-B	Pearson r	0.161	-0.277	0.086	-0.011	-0.102	0.120	0.418
	Sig. (2-tailed)	0.395	0.138	0.651	0.955	0.592	0.527	0.021
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000

Table 6. cont.

Factors	Statistic	Age	Gender	Education Level	Self-rated Health	Number of Medications	GDS-SF	STAI state anxiety
RT of Fact 1-1	Pearson r	0.156	-0.240	0.098	0.185	0.242	-0.025	0.001
	Sig. (2-tailed)	0.411	0.201	0.605	0.328	0.197	0.895	0.998
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
RT of Fact 2-2	Pearson r	0.251	-0.364	0.004	0.188	0.099	0.109	0.106
	Sig. (2-tailed)	0.181	0.048	0.983	0.320	0.604	0 565	0.578
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
RT of Fact 3-3	Pearson r	0.122	-0.265	-0.043	0.003	0.029	0.081	0.109
	Sig. (2-tailed)	0.522	0.157	0.821	0.988	0.881	0.669	0.568
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
RT of Foil 1-1	Pearson r	0.203	-0.336	-0.022	0.148	0.067	0.157	0.161
	Sig. (2-tailed)	0.282	0.069	0.908	0.434	0.724	0.407	0.396
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
RT of Foil 2-2	Pearson r	0.162	-0.230	-0.009	0.097	0.101	0.041	0.102
	Sig. (2-tailed)	0.392	0.221	0.962	0.611	0.595	0.829	0.591
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
RT of Foil 3-3	Pearson r	0.155	-0.233	0.049	0.227	0.165	0.247	0.206
	Sig. (2-tailed)	0.414	0.216	0.799	0.228	0.384	0.187	0.274
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
RT Mean of all Fact	Pearson r	0.190	-0.316	0.016	0.129	0.125	0.064	0.082
	Sig. (2-tailed)	0.314	0.089	0.933	0.496	0.509	0.735	0.665
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
RT Mean of all Foil	Pearson r	0.201	-0.309	0.012	0.192	0.137	0.185	0.189
	Sig. (2-tailed)	0.286	0.097	0.951	0.309	0.471	0.328	0.317
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
RT Mean of all Fan 1-1	Pearson r	0.187	-0.302	0.037	0.172	0.157	0.072	0.087
	Sig. (2-tailed)	0.322	0.105	0.845	0.362	0.407	0.704	0.648
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
RT Mean of all Fan 2-2	Pearson r	0.218	-0.314	-0.003	0.151	0.105	0.080	0.110
	Sig. (2-tailed)	0.247	0.091	0.989	0.427	0.580	0.675	0.564
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
RT Mean of all Fan 3-3	Pearson r	0.149	-0.264	0.007	0.131	0.108	0.182	0.172
	Sig. (2-tailed)	0.433	0.159	0.973	0.490	0.568	0.337	0.365
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
Mean of All RT	Pearson r	0.199	-0.317	0.014	0.163	0.133	0.126	0.138
	Sig. (2-tailed)	0.293	0.088	0.941	0.389	0.484	0.506	0.469
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
NC of Fact 1-1	Pearson r	-0.194	0.021	-0.108	0.055	-0.057	0.123	-0.103
	Sig. (2-tailed)	0.304	0.911	0.571	0.772	0.766	0.519	0.589
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
NC of Fact 2-2	Pearson r	0.086	-0.004	-0.090	0.019	-0.044	0.001	-0.169
	Sig. (2-tailed)	0.653	0.985	0.637	0.921	0.818	0.994	0.373
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000

Table 6. cont.

Factors	Statistic	Age	Gender	Education Level	Self-rated Health	Number of Medications	GDS-SF	STAI state anxiety
NC of Fact 3-3	Pearson r	0.052	0.123	0.186	-0.041	0.095	-0.359	-0.351
	Sig. (2-tailed)	0.787	0.519	0.324	0.828	0.616	0.051	0.057
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
NC of Foil 1-1	Pearson r	-0.101	0.231	-0.042	-0.156	-0.157	-0.016	-0.186
	Sig. (2-tailed)	0.594	0.219	0.826	0.409	0.406	0.933	0.326
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
NC of Foil 2-2	Pearson r	-0.228	0.101	0.204	-0.148	-0.059	-0.082	-0.125
	Sig. (2-tailed)	0.226	0.595	0.280	0.437	0.758	0.666	0.510
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
NC of Foil 3-3	Pearson r	-0.209	0.068	0.199	-0.018	0.058	0.109	-0.047
	Sig. (2-tailed)	0.267	0.721	0.291	0.925	0.762	0.568	0.804
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
NC Mean of all Fact	Pearson r	0.011	0.086	0.061	-0.005	0.031	-0.203	-0.324
	Sig. (2-tailed)	0.954	0.651	0.750	0.978	0.869	0.281	0.081
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
NC Mean of all Foil	Pearson r	-0.208	0.153	0.140	-0.114	-0.051	0.021	-0.132
	Sig. (2-tailed)	0.270	0.420	0.459	0.549	0.788	0.913	0.485
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
NC Mean of all Fan 1-1	Pearson r	-0.134	0.187	-0.063	-0.107	-0.139	0.022	-0.174
	Sig. (2-tailed)	0.480	0.322	0.740	0.574	0.463	0.908	0.357
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
NC Mean of all Fan 2-2	Pearson r	-0.126	0.071	0.107	-0.097	-0.061	-0.058	-0.162
	Sig. (2-tailed)	0.507	0.710	0.573	0.609	0.750	0.761	0.392
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
NC Mean of all Fan 3-3	Pearson r	-0.134	0.117	0.252	-0.036	0.095	-0.107	-0.223
	Sig. (2-tailed)	0.481	0.537	0.179	0.851	0.617	0.573	0.236
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
Mean of All NC	Pearson r	-0.151	0.146	0.127	-0.087	-0.027	-0.060	-0.219
	Sig. (2-tailed)	0.425	0.441	0.503	0.648	0.889	0.753	0.245
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000

Table 6. cont.

Factors	Statistic	STAI trait anxiety	Reading Rate	WAIS-III Vocab. (raw)	WAIS-III Vocab. (scaled)	Number of Trials	Mood-group	DACL-A
Age	Pearson r	0.075	0.162	0.241	0.302	0.371	0.109	0.218
	Sig. (2-tailed)	0.692	0.393	0.199	0.104	0.043	0.565	0.247
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
Gender	Pearson r	-0.024	0.001	0.187	0.238	-0.150	-0.226	-0.140
	Sig. (2-tailed)	0.901	0.996	0.323	0.204	0.428	0.230	0.459
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
Education Level	Pearson r	0.041	0.080	-0.003	-0.017	0.200	0.000	-0.039
	Sig. (2-tailed)	0.830	0.676	0.989	0.930	0.289	1.000	0.838
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
Self-rated Health	Pearson r	0.331	0.028	-0.082	0.039	-0.053	0.219	0.307
	Sig. (2-tailed)	0.074	0.883	0.666	0.838	0.782	0.246	0.099
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
Number of Medications	Pearson r	0.241	-0.152	-0.240	-0.156	-0.092	0.073	0.042
	Sig. (2-tailed)	0.200	0.424	0.202	0.409	0.630	0.702	0.824
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
GDS-SF	Pearson r	0.248	-0.291	0.036	0.060	-0.197	-0.139	0.349
	Sig. (2-tailed)	0.186	0.119	0.849	0.752	0.296	0.464	0.059
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
STAI state Anxiety	Pearson r	0.557	-0.262	-0.245	-0.193	-0.160	-0.142	0.581
	Sig. (2-tailed)	0.001	0.162	0.192	0.307	0.400	0.455	0.001
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
STAI trait Anxiety	Pearson r	1.000	-0.107	-0.087	-0.003	-0.010	-0.099	0.548
	Sig. (2-tailed)	--	0.574	0.649	0.989	0.959	0.603	0.002
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
Reading Rate	Pearson r	-0.107	1.000	0.238	0.201	0.347	0.131	-0.044
	Sig. (2-tailed)	0.574	--	0.206	0.286	0.060	0.492	0.816
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
WAIS-III Vocab. (raw)	Pearson r	-0.087	0.238	1.000	0.967	-0.386	0.238	0.032
	Sig. (2-tailed)	0.649	0.206	--	0.000	0.035	0.206	0.868
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
WAIS-III Vocab. (scaled)	Pearson r	-0.003	0.201	0.967	1.000	-0.389	0.220	0.017
	Sig. (2-tailed)	0.989	0.286	0.000	--	0.034	0.243	0.927
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
Number of Trials	Pearson r	-0.010	0.347	-0.386	-0.389	1.000	-0.107	-0.015
	Sig. (2-tailed)	0.959	0.060	0.035	0.034	--	0.575	0.937
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
Mood-group	Pearson r	-0.099	0.131	0.238	0.220	-0.107	1.000	0.224
	Sig. (2-tailed)	0.603	0.492	0.206	0.243	0.575	--	0.235
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
DACL-A	Pearson r	0.548	-0.044	0.032	0.017	-0.015	0.224	1.000
	Sig. (2-tailed)	0.002	0.816	0.868	0.927	0.937	0.235	--
	N	30.000	30.000	30.000	30.000	0.000	30.000	30.000
DACL-B	Pearson r	0.423	0.120	0.050	0.009	0.167	-0.070	0.674
	Sig. (2-tailed)	0.020	0.529	0.793	0 962	0.379	0.712	0.000
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000

Table 6. cont.

Factors	Statistic	STAI trait anxiety	Reading Rate	WAIS-III Vocab. (raw)	WAIS-III Vocab. (scaled)	Number of Trials	Mood-group	DACL-A
RT of Fact 1-1	Pearson r	0.283	-0.180	-0.302	-0.274	-0.007	0.056	0.136
	Sig. (2-tailed)	0.130	0.341	0.105	0.143	0.971	0.769	0.474
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
RT of Fact 2-2	Pearson r	0.314	-0.264	-0.244	-0.218	0.037	0.104	0.148
	Sig. (2-tailed)	0.091	0.158	0.194	0.247	0.847	0.585	0.434
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
RT of Fact 3-3	Pearson r	0.371	-0.316	-0.172	-0.169	0.005	0.036	0.266
	Sig. (2-tailed)	0.044	0.089	0.365	0.373	0.977	0.851	0.155
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
RT of Foil 1-1	Pearson r	0.413	-0.179	-0.279	-0.256	0.017	-0.043	0.274
	Sig. (2-tailed)	0.023	0.344	0.136	0.173	0.927	0.821	0.143
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
RT of Foil 2-2	Pearson r	0.212	-0.296	-0.345	-0.343	0.011	0.030	0.168
	Sig. (2-tailed)	0.261	0.112	0.062	0.064	0.955	0.875	0.375
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
RT of Foil 3-3	Pearson r	0.271	-0.152	-0.140	-0.161	0.117	0.110	0.412
	Sig. (2-tailed)	0.147	0.424	0.460	0.396	0.537	0.564	0.024
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
RT Mean of all Fact	Pearson r	0.354	-0.281	-0.255	-0.235	0.013	0.070	0.205
	Sig. (2-tailed)	0.055	0.132	0.174	0.211	0.944	0.712	0.278
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
RT Mean of all Foil	Pearson r	0.347	-0.240	-0.287	-0.288	0.065	0.047	0.348
	Sig. (2-tailed)	0.060	0.201	0.124	0.123	0.734	0.805	0.059
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
RT Mean of all Fan 1-1	Pearson r	0.364	-0.186	-0.301	-0.275	0.006	0.005	0.216
	Sig. (2-tailed)	0.048	0.324	0.106	0.142	0.975	0.980	0.252
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
RT Mean of all Fan 2-2	Pearson r	0.278	-0.296	-0.311	-0.296	0.025	0.071	0.167
	Sig. (2-tailed)	0.137	0.112	0.095	0.113	0.895	0.710	0.378
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
RT Mean of all Fan 3-3	Pearson r	0.338	-0.243	-0.165	-0.175	0.070	0.080	0.367
	Sig. (2-tailed)	0.068	0.196	0.384	0.355	0.714	0.673	0.046
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
Mean of All RT	Pearson r	0.356	-0.264	-0.275	-0.265	0.040	0.059	0.280
	Sig. (2-tailed)	0.054	0.158	0.142	0.157	0.836	0.755	0.133
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
NC of Fact 1-1	Pearson r	-0.134	-0.046	0.132	0.057	-0.045	0.378	0.124
	Sig. (2-tailed)	0.480	0.809	0.487	0.766	0.814	0.039	0.512
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
NC of Fact 2-2	Pearson r	0.159	-0.025	0.184	0.141	0.050	0.259	0.284
	Sig. (2-tailed)	0.402	0.894	0.331	0.456	0.791	0.168	0.128
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
NC of Fact 3-3	Pearson r	-0.317	0.207	0.408	0.352	-0.051	0.332	-0.047
	Sig. (2-tailed)	0.088	0.272	0.025	0.056	0.791	0.073	0.804
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000

Table 6. cont.

Factors	Statistic	STAI trait anxiety	Reading Rate	WAIS-III Vocab. (raw)	WAIS-III Vocab. (scaled)	Number of Trials	Mood-group	DACL-A
NC of Foil 1-1	Pearson r	0.069	-0.058	0.341	0.294	-0.102	0.191	0.129
	Sig. (2-tailed)	0.716	0.761	0.065	0.114	0.592	0.311	0.498
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
NC of Foil 2-2	Pearson r	0.090	-0.176	0.307	0.239	-0.230	0.169	0.189
	Sig. (2-tailed)	0.636	0.352	0.099	0.204	0.222	0.373	0.316
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
NC of Foil 3-3	Pearson r	0.276	0.006	-0.015	-0.076	0.127	-0.188	0.016
	Sig. (2-tailed)	0.140	0.975	0.937	0.690	0.503	0.319	0.933
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
NC Mean of all Fact	Pearson r	-0.190	0.115	0.375	0.301	-0.028	0.421	0.107
	Sig. (2-tailed)	0.314	0.544	0.041	0.105	0.885	0.020	0.573
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
NC Mean of all Foil	Pearson r	0.186	-0.073	0.218	0.150	-0.048	0.035	0.115
	Sig. (2-tailed)	0.325	0.702	0.248	0.429	0.801	0.853	0.546
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
NC Mean of all Fan 1-1	Pearson r	0.017	-0.058	0.304	0.247	-0.092	0.257	0.136
	Sig. (2-tailed)	0.931	0.759	0.102	0.189	0.627	0.171	0.474
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
NC Mean of all Fan 2-2	Pearson r	0.133	-0.137	0.298	0.232	-0.142	0.232	0.258
	Sig. (2-tailed)	0.484	0.470	0.109	0.218	0.453	0.217	0.169
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
NC Mean of all Fan 3-3	Pearson r	0.044	0.115	0.205	0.128	0.071	0.031	-0.013
	Sig. (2-tailed)	0.818	0.546	0.278	0.499	0.709	0.869	0.946
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
Mean of All NC	Pearson r	0.068	-0.012	0.302	0.224	-0.046	0.183	0.125
	Sig. (2-tailed)	0.720	0.952	0.105	0.235	0.809	0.334	0.509
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000

Table 6. cont.

Factors	Statistic	DACL-B	RT of Fact 1-1	RT of Fact 2-2	RT of Fact 3-3	RT of Foil 1-1	RT of Foil 2-2	RT of Foil 3-3
Age	Pearson r	0.161	0.156	0.251	0.122	0.203	0.162	0.155
	Sig. (2-tailed)	0.395	0.411	0.181	0.522	0.282	0.392	0.414
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
Gender	Pearson r	-0.277	-0.240	-0.364	-0.265	-0.336	-0.230	-0.233
	Sig. (2-tailed)	0.138	0.201	0.048	0.157	0.069	0.221	0.216
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
Education Level	Pearson r	0.086	0.098	0.004	-0.043	-0.022	-0.009	0.049
	Sig. (2-tailed)	0.651	0.605	0.983	0.821	0.908	0.962	0.799
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
Self-rated Health	Pearson r	-0.011	0.185	0.188	0.003	0.148	0.097	0.227
	Sig. (2-tailed)	0.955	0.328	0.320	0.988	0.434	0.611	0.228
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
Number of Medications	Pearson r	-0.102	0.242	0.099	0.029	0.067	0.101	0.165
	Sig. (2-tailed)	0.592	0.197	0.604	0.881	0.724	0.595	0.384
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
GDS-SF	Pearson r	0.120	-0.025	0.109	0.081	0.157	0.041	0.247
	Sig. (2-tailed)	0.527	0.895	0.565	0.669	0.407	0.829	0.187
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
STAI state anxiety	Pearson r	0.418	0.001	0.106	0.109	0.161	0.102	0.206
	Sig. (2-tailed)	0.021	0.998	0.578	0.568	0.396	0.591	0.274
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
STAI trait anxiety	Pearson r	0.423	0.283	0.314	0.371	0.413	0.212	0.271
	Sig. (2-tailed)	0.020	0.130	0.091	0.044	0.023	0.261	0.147
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
Reading Rate	Pearson r	0.120	-0.180	-0.264	-0.316	-0.179	-0.296	-0.152
	Sig. (2-tailed)	0.529	0.341	0.158	0.089	0.344	0.112	0.424
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
WAIS-III Vocab. (raw)	Pearson r	0.050	-0.302	-0.244	-0.172	-0.279	-0.345	-0.140
	Sig. (2-tailed)	0.793	0.105	0.194	0.365	0.136	0.062	0.460
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
WAIS-III Vocab. (scaled)	Pearson r	0.009	-0.274	-0.218	-0.169	-0.256	-0.343	-0.161
	Sig. (2-tailed)	0.962	0.143	0.247	0.373	0.173	0.064	0.396
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
Number of Trials	Pearson r	0.167	-0.007	0.037	0.005	0.017	0.011	0.117
	Sig. (2-tailed)	0.379	0.971	0.847	0.977	0.927	0.955	0.537
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
Mood-group	Pearson r	-0.070	0.056	0.104	0.036	-0.043	0.030	0.110
	Sig. (2-tailed)	0.712	0.769	0.585	0.851	0.821	0.875	0.564
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
DACL-A	Pearson r	0.674	0.136	0.148	0.266	0.274	0.168	0.412
	Sig. (2-tailed)	0.000	0.474	0.434	0.155	0.143	0.375	0.024
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
DACL-B	Pearson r	1.000	-0.031	0.081	0.131	0.150	-0.123	0.291
	Sig. (2-tailed)	--	0.872	0.672	0.491	0.430	0.517	0.118
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000

Table 6. cont.

Factors	Statistic	DACL-B	RT of Fact 1-1	RT of Fact 2-2	RT of Fact 3-3	RT of Foil 1-1	RT of Foil 2-2	RT of Foil 3-3
RT of Fact 1-1	Pearson r	-0.031	1.000	0.776	0.727	0.853	0.774	0.610
	Sig. (2-tailed)	0.872	--	0.000	0.000	0.000	0.000	0.000
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
RT of Fact 2-2	Pearson r	0.081	0.776	1.000	0.795	0.816	0.794	0.644
	Sig. (2-tailed)	0.672	0.000	--	0.000	0.000	0.000	0.000
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
RT of Fact 3-3	Pearson r	0.131	0.727	0.795	1.000	0.765	0.695	0.760
	Sig. (2-tailed)	0.491	0.000	0.000	--	0.000	0.000	0.000
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
RT of Foil 1-1	Pearson r	0.150	0.853	0.816	0.765	1.000	0.777	0.511
	Sig. (2-tailed)	0.430	0.000	0.000	0.000	--	0.000	0.004
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
RT of Foil 2-2	Pearson r	-0.123	0.774	0.794	0.695	0.777	1.000	0.501
	Sig. (2-tailed)	0.517	0.000	0.000	0.000	0.000	--	0.005
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
RT of Foil 3-3	Pearson r	0.291	0.610	0.644	0.760	0.511	0.501	1.000
	Sig. (2-tailed)	0.118	0.000	0.000	0.000	0.004	0.005	--
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
RT Mean of all Fact	Pearson r	0.072	0.896	0.934	0.925	0.879	0.817	0.736
	Sig. (2-tailed)	0.706	0.000	0.000	0.000	0.000	0.000	0.000
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
RT Mean of all Foil	Pearson r	0.143	0.861	0.872	0.872	0.868	0.866	0.825
	Sig. (2-tailed)	0.450	0.000	0.000	0.000	0.000	0.000	0.000
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
RT Mean of all Fan 1-1	Pearson r	0.065	0.960	0.828	0.775	0.966	0.805	0.580
	Sig. (2-tailed)	0.731	0.000	0.000	0.000	0.000	0.000	0.001
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
RT Mean of all Fan 2-2	Pearson r	-0.022	0.818	0.948	0.787	0.841	0.946	0.605
	Sig. (2-tailed)	0.909	0.000	0.000	0.000	0.000	0.000	0.000
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
RT Mean of all Fan 3-3	Pearson r	0.231	0.707	0.761	0.928	0.670	0.630	0.947
	Sig. (2-tailed)	0.219	0.000	0.000	0.000	0.000	0.000	0.000
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
Mean of All RT	Pearson r	0.109	0.891	0.915	0.911	0.886	0.853	0.792
	Sig. (2-tailed)	0.566	0.000	0.000	0.000	0.000	0.000	0.000
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
NC of Fact 1-1	Pearson r	0.006	-0.129	-0.028	0.010	-0.170	-0.081	0.250
	Sig. (2-tailed)	0.974	0.497	0.883	0.958	0.370	0.672	0.182
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
NC of Fact 2-2	Pearson r	0.268	0.212	0.182	0.239	0.163	-0.034	0.441
	Sig. (2-tailed)	0.152	0.261	0.335	0.203	0.390	0.857	0.015
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
NC of Fact 3-3	Pearson r	-0.102	-0.303	-0.437	-0.382	-0.590	-0.367	-0.094
	Sig. (2-tailed)	0.592	0.103	0.016	0.037	0.001	0.046	0.621
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000

Table 6. cont.

Factors	Statistic	DACL-B	RT of Fact 1-1	RT of Fact 2-2	RT of Fact 3-3	RT of Foil 1-1	RT of Foil 2-2	RT of Foil 3-3
NC of Foil 1-1	Pearson r	0.144	-0.106	-0.029	0.123	-0.149	-0.263	0.135
	Sig. (2-tailed)	0.449	0.579	0.878	0.516	0.432	0.160	0.477
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
NC of Foil 2-2	Pearson r	0.160	-0.040	-0.048	0.149	-0.179	-0.255	0.285
	Sig. (2-tailed)	0.399	0.834	0.801	0.432	0.345	0.174	0.127
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
NC of Foil 3-3	Pearson r	0.128	-0.149	-0.077	-0.069	-0.253	-0.275	0.201
	Sig. (2-tailed)	0.500	0.433	0.686	0.719	0.177	0.141	0.286
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
NC Mean of all Fact	Pearson r	0.032	-0.160	-0.231	-0.163	-0.380	-0.279	0.169
	Sig. (2-tailed)	0.867	0.399	0.219	0.390	0.039	0.136	0.372
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
NC Mean of all Foil	Pearson r	0.165	-0.124	-0.063	0.060	-0.233	-0.311	0.235
	Sig. (2-tailed)	0.383	0.514	0.742	0.753	0.216	0.095	0.212
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
NC Mean of all Fan 1-1	Pearson r	0.114	-0.119	-0.031	0.100	-0.165	-0.229	0.176
	Sig. (2-tailed)	0.548	0.531	0.871	0.601	0.385	0.224	0.351
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
NC Mean of all Fan 2-2	Pearson r	0.230	0.063	0.044	0.210	-0.058	-0.197	0.393
	Sig. (2-tailed)	0.222	0.741	0.817	0.266	0.763	0.296	0.031
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
NC Mean of all Fan 3-3	Pearson r	0.044	-0.275	-0.291	-0.255	-0.508	-0.406	0.105
	Sig. (2-tailed)	0.816	0.141	0.118	0.173	0.004	0.026	0.580
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
Mean of All NC	Pearson r	0.135	-0.152	-0.133	-0.016	-0.315	-0.335	0.238
	Sig. (2-tailed)	0.476	0.423	0.485	0.935	0.090	0.070	0.206
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000

Table 6. cont.

Factors	Statistic	RT Mean of all Fact	RT Mean of all Foil	RT Mean of all Fan 1-1	RT Mean of all Fan 2-2	RT Mean of all Fan 3-3	Mean of All RT	NC of Fact 1-1
Age	Pearson r	0.190	0.201	0.187	0.218	0.149	0.199	-0.194
	Sig. (2-tailed)	0.314	0.286	0.322	0.247	0.433	0.293	0.304
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
Gender	Pearson r	-0.316	-0.309	-0.302	-0.314	-0.264	-0.317	0.021
	Sig. (2-tailed)	0.089	0.097	0.105	0.091	0.159	0.088	0.911
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
Education Level	Pearson r	0.016	0.012	0.037	-0.003	0.007	0.014	-0.108
	Sig. (2-tailed)	0.933	0.951	0.845	0.989	0.973	0.941	0.571
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
Self-rated Health	Pearson r	0.129	0.192	0.172	0.151	0.131	0.163	0.055
	Sig. (2-tailed)	0.496	0.309	0.362	0.427	0.490	0.389	0.772
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
Number of Medications	Pearson r	0.125	0.137	0.157	0.105	0.108	0.133	-0.057
	Sig. (2-tailed)	0.509	0.471	0.407	0.580	0.568	0.484	0.766
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
GDS-SF	Pearson r	0.064	0.185	0.072	0.080	0.182	0.126	0.123
	Sig. (2-tailed)	0.735	0.328	0.704	0.675	0.337	0.506	0.519
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
STAI state anxiety	Pearson r	0.082	0.189	0.087	0.110	0.172	0.138	-0.103
	Sig. (2-tailed)	0.665	0.317	0.648	0.564	0.365	0.469	0.589
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
STAI trait anxiety	Pearson r	0.354	0.347	0.364	0.278	0.338	0.356	-0.134
	Sig. (2-tailed)	0.055	0.060	0.048	0.137	0.068	0.054	0.480
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
Reading Rate	Pearson r	-0.281	-0.240	-0.186	-0.296	-0.243	-0.264	-0.046
	Sig. (2-tailed)	0.132	0.201	0.324	0.112	0.196	0.158	0.809
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
WAIS-III Vocab. (raw)	Pearson r	-0.255	-0.287	-0.301	-0.311	-0.165	-0.275	0.132
	Sig. (2-tailed)	0.174	0.124	0.106	0.095	0.384	0.142	0.487
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
WAIS-III Vocab. (scaled)	Pearson r	-0.235	-0.288	-0.275	-0.296	-0.175	-0.265	0.057
	Sig. (2-tailed)	0.211	0.123	0.142	0.113	0.355	0.157	0.766
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
Number of Trials	Pearson r	0.013	0.065	0.006	0.025	0.070	0.040	-0.045
	Sig. (2-tailed)	0.944	0.734	0.975	0.895	0.714	0.836	0.814
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
Mood-group	Pearson r	0.070	0.047	0.005	0.071	0.080	0.059	0.378
	Sig. (2-tailed)	0.712	0.805	0.980	0.710	0.673	0.755	0.039
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
DACL-A	Pearson r	0.205	0.348	0.216	0.167	0.367	0.280	0.124
	Sig. (2-tailed)	0.278	0.059	0.252	0.378	0.046	0.133	0.512
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
DACL-B	Pearson r	0.072	0.143	0.065	-0.022	0.231	0.109	0.006
	Sig. (2-tailed)	0.706	0.450	0.731	0.909	0.219	0.566	0.974
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000

Table 6. cont.

Factors	Statistic	RT Mean of all Fact	RT Mean of all Foil	RT Mean of all Fan 1-1	RT Mean of all Fan 2-2	RT Mean of all Fan 3-3	Mean of All RT	NC of Fact 1-1
RT of Fact 1-1	Pearson r	0.896	0.861	0.960	0.818	0.707	0.891	-0.129
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	0.000	0.497
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
RT of Fact 2-2	Pearson r	0.934	0.872	0.828	0.948	0.761	0.915	-0.028
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	0.000	0.883
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
RT of Fact 3-3	Pearson r	0.925	0.872	0.775	0.787	0.928	0.911	0.010
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	0.000	0.958
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
RT of Foil 1-1	Pearson r	0.879	0.868	0.966	0.841	0.670	0.886	-0.170
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	0.000	0.370
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
RT of Foil 2-2	Pearson r	0.817	0.866	0.805	0.946	0.630	0.853	-0.081
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	0.000	0.672
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
RT of Foil 3-3	Pearson r	0.736	0.825	0.580	0.605	0.947	0.792	0.250
	Sig. (2-tailed)	0.000	0.000	0.001	0.000	0.000	0.000	0.182
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
RT Mean of all Fact	Pearson r	1.000	0.945	0.922	0.925	0.878	0.986	-0.048
	Sig. (2-tailed)	.	0.000	0.000	0.000	0.000	0.000	0.803
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
RT Mean of all Foil	Pearson r	0.945	1.000	0.898	0.917	0.903	0.986	0.028
	Sig. (2-tailed)	0.000.		0.000	0.000	0.000	0.000	0.881
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
RT Mean of all Fan 1-1	Pearson r	0.922	0.898	1.000	0.862	0.714	0.923	-0.156
	Sig. (2-tailed)	0.000	0.000.		0.000	0.000	0.000	0.411
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
RT Mean of all Fan 2-2	Pearson r	0.925	0.917	0.862	1.000	0.735	0.934	-0.057
	Sig. (2-tailed)	0.000	0.000	0.000.		0.000	0.000	0.764
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
RT Mean of all Fan 3-3	Pearson r	0.878	0.903	0.714	0.735	1.000	0.903	0.148
	Sig. (2-tailed)	0.000	0.000	0.000	0.000.		0.000	0.434
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
Mean of All RT	Pearson r	0.986	0.986	0.923	0.934	0.903	1.000	-0.010
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000.		0.959
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
NC of Fact 1-1	Pearson r	-0.048	0.028	-0.156	-0.057	0.148	-0.010	1.000
	Sig. (2-tailed)	0.803	0.881	0.411	0.764	0.434	0.959.	
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
NC of Fact 2-2	Pearson r	0.231	0.250	0.194	0.079	0.370	0.244	0.587
	Sig. (2-tailed)	0.220	0.183	0.305	0.679	0.044	0.195	0.001
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
NC of Fact 3-3	Pearson r	-0.410	-0.382	-0.470	-0.425	-0.242	-0.402	0.215
	Sig. (2-tailed)	0.024	0.037	0.009	0.019	0.198	0.028	0.253
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000

Table 6. cont.

Factors	Statistic	RT Mean of all Fact	RT Mean of all Foil	RT Mean of all Fan 1-1	RT Mean of all Fan 2-2	RT Mean of all Fan 3-3	Mean of All RT	NC of Fact 1-1
NC of Foil 1-1	Pearson r	0.005	-0.084	-0.133	-0.154	0.138	-0.040	0.695
	Sig. (2-tailed)	0.980	0.659	0.483	0.418	0.467	0.833	0.000
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
NC of Foil 2-2	Pearson r	0.029	-0.022	-0.116	-0.159	0.237	0.004	0.530
	Sig. (2-tailed)	0.877	0.909	0.541	0.400	0.208	0.984	0.003
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
NC of Foil 3-3	Pearson r	-0.103	-0.094	-0.211	-0.185	0.081	-0.100	0.409
	Sig. (2-tailed)	0.587	0.622	0.263	0.327	0.669	0.599	0.025
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
NC Mean of all Fact	Pearson r	-0.201	-0.154	-0.285	-0.269	0.016	-0.180	0.639
	Sig. (2-tailed)	0.286	0.415	0.127	0.150	0.932	0.340	0.000
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
NC Mean of all Foil	Pearson r	-0.039	-0.084	-0.188	-0.196	0.164	-0.062	0.625
	Sig. (2-tailed)	0.839	0.659	0.321	0.299	0.387	0.744	0.000
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
NC Mean of all Fan 1-1	Pearson r	-0.010	-0.058	-0.148	-0.136	0.150	-0.034	0.826
	Sig. (2-tailed)	0.959	0.762	0.434	0.472	0.429	0.858	0.000
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
NC Mean of all Fan 2-2	Pearson r	0.120	0.092	0.000	-0.080	0.329	0.108	0.632
	Sig. (2-tailed)	0.526	0.629	0.999	0.674	0.076	0.571	0.000
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
NC Mean of all Fan 3-3	Pearson r	-0.297	-0.275	-0.411	-0.368	-0.066	-0.290	0.429
	Sig. (2-tailed)	0.111	0.141	0.024	0.045	0.730	0.120	0.018
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
Mean of All NC	Pearson r	-0.104	-0.120	-0.246	-0.246	0.128	-0.113	0.703
	Sig. (2-tailed)	0.586	0.528	0.191	0.189	0.499	0.551	0.000
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000

Table 6. cont.

Factors	Statistic	NC of Fact 2-2	NC of Fact 3-3	NC of Foil 1-1	NC of Foil 2-2	NC of Foil 3-3	NC Mean of all Fact	NC Mean of all Foil
Age	Pearson r	0.086	0.052	-0.101	-0.228	-0.209	0.011	-0.208
	Sig. (2-tailed)	0.653	0.787	0.594	0.226	0.267	0.954	0.270
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
Gender	Pearson r	-0.004	0.123	0.231	0.101	0.068	0.086	0.153
	Sig. (2-tailed)	0.985	0.519	0.219	0.595	0.721	0.651	0.420
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
Education Level	Pearson r	-0.090	0.186	-0.042	0.204	0.199	0.061	0.140
	Sig. (2-tailed)	0.637	0.324	0.826	0.280	0.291	0.750	0.459
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
Self-rated Health	Pearson r	0.019	-0.041	-0.156	-0.148	-0.018	-0.005	-0.114
	Sig. (2-tailed)	0.921	0.828	0.409	0.437	0.925	0.978	0.549
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
Number of Medications	Pearson r	-0.044	0.095	-0.157	-0.059	0.058	0.031	-0.051
	Sig. (2-tailed)	0.818	0.616	0.406	0.758	0.762	0.869	0.788
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
GDS-SF	Pearson r	0.001	-0.359	-0.016	-0.082	0.109	-0.203	0.021
	Sig. (2-tailed)	0.994	0.051	0.933	0.666	0.568	0.281	0.913
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
STAI state anxiety	Pearson r	-0.169	-0.351	-0.186	-0.125	-0.047	-0.324	-0.132
	Sig. (2-tailed)	0.373	0.057	0.326	0.510	0.804	0.081	0.485
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
STAI trait anxiety	Pearson r	0.159	-0.317	0.069	0.090	0.276	-0.190	0.186
	Sig. (2-tailed)	0.402	0.088	0.716	0.636	0.140	0.314	0.325
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
Reading Rate	Pearson r	-0.025	0.207	-0.058	-0.176	0.006	0.115	-0.073
	Sig. (2-tailed)	0.894	0.272	0.761	0.352	0.975	0.544	0.702
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
WAIS-III Vocab. (raw)	Pearson r	0.184	0.408	0.341	0.307	-0.015	0.375	0.218
	Sig. (2-tailed)	0.331	0.025	0.065	0.099	0.937	0.041	0.248
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
WAIS-III Vocab. (scaled)	Pearson r	0.141	0.352	0.294	0.239	-0.076	0.301	0.150
	Sig. (2-tailed)	0.456	0.056	0.114	0.204	0.690	0.105	0.429
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
Number of Trials	Pearson r	0.050	-0.051	-0.102	-0.230	0.127	-0.028	-0.048
	Sig. (2-tailed)	0.791	0.791	0.592	0.222	0.503	0.885	0.801
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
Mood-group	Pearson r	0.259	0.332	0.191	0.169	-0.188	0.421	0.035
	Sig. (2-tailed)	0.168	0.073	0.311	0.373	0.319	0.020	0.853
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
DACL-A	Pearson r	0.284	-0.047	0.129	0.189	0.016	0.107	0.115
	Sig. (2-tailed)	0.128	0.804	0.498	0.316	0.933	0.573	0.546
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
DACL-B	Pearson r	0.268	-0.102	0.144	0.160	0.128	0.032	0.165
	Sig. (2-tailed)	0.152	0.592	0.449	0.399	0.500	0.867	0.383
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000

Table 6. cont.

Factors	Statistic	NC of Fact 2-2	NC of Fact 3-3	NC of Foil 1-1	NC of Foil 2-2	NC of Foil 3-3	NC Mean of all Fact	NC Mean of all Foil
RT of Fact 1-1	Pearson r	0.212	-0.303	-0.106	-0.040	-0.149	-0.160	-0.124
	Sig. (2-tailed)	0.261	0.103	0.579	0.834	0.433	0.399	0.514
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
RT of Fact 2-2	Pearson r	0.182	-0.437	-0.029	-0.048	-0.077	-0.231	-0.063
	Sig. (2-tailed)	0.335	0.016	0.878	0.801	0.686	0.219	0.742
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
RT of Fact 3-3	Pearson r	0.239	-0.382	0.123	0.149	-0.069	-0.163	0.060
	Sig. (2-tailed)	0.203	0.037	0.516	0.432	0.719	0.390	0.753
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
RT of Foil 1-1	Pearson r	0.163	-0.590	-0.149	-0.179	0.253	-0.380	-0.233
	Sig. (2-tailed)	0.390	0.001	0.432	0.345	0.177	0.039	0.216
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
RT of Foil 2-2	Pearson r	-0.034	-0.367	-0.263	-0.255	-0.275	-0.279	-0.311
	Sig. (2-tailed)	0.857	0.046	0.160	0.174	0.141	0.136	0.095
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
RT of Foil 3-3	Pearson r	0.441	-0.094	0.135	0.285	0.201	0.169	0.235
	Sig. (2-tailed)	0.015	0.621	0.477	0.127	0.286	0.372	0.212
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
RT Mean of all Fact	Pearson r	0.231	-0.410	0.005	0.029	-0.103	-0.201	-0.039
	Sig. (2-tailed)	0.220	0.024	0.980	0.877	0.587	0.286	0.839
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
RT Mean of all Foil	Pearson r	0.250	-0.382	-0.084	-0.022	-0.094	-0.154	-0.084
	Sig. (2-tailed)	0.183	0.037	0.659	0.909	0.622	0.415	0.659
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
RT Mean of all Fan 1-1	Pearson r	0.194	-0.470	-0.133	-0.116	-0.211	-0.285	-0.188
	Sig. (2-tailed)	0.305	0.009	0.483	0.541	0.263	0.127	0.321
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
RT Mean of all Fan 2-2	Pearson r	0.079	-0.425	-0.154	-0.159	-0.185	-0.269	-0.196
	Sig. (2-tailed)	0.679	0.019	0.418	0.400	0.327	0.150	0.299
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
RT Mean of all Fan 3-3	Pearson r	0.370	-0.242	0.138	0.237	0.081	0.016	0.164
	Sig. (2-tailed)	0.044	0.198	0.467	0.208	0.669	0.932	0.387
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
Mean of All RT	Pearson r	0.244	-0.402	-0.040	0.004	-0.100	-0.180	-0.062
	Sig. (2-tailed)	0.195	0.028	0.833	0.984	0.599	0.340	0.744
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
NC of Fact 1-1	Pearson r	0.587	0.215	0.695	0.530	0.409	0.639	0.625
	Sig. (2-tailed)	0.001	0.253	0.000	0.003	0.025	0.000	0.000
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
NC of Fact 2-2	Pearson r	1.000	0.301	0.596	0.493	0.377	0.730	0.561
	Sig. (2-tailed)	--	0.106	0.001	0.006	0.040	0.000	0.001
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
NC of Fact 3-3	Pearson r	0.301	1.000	0.220	0.325	0.155	0.834	0.258
	Sig. (2-tailed)	0.106	--	0.242	0.080	0.414	0.000	0.169
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000

Table 6. cont.

Factors	Statistic	NC of Fact 2-2	NC of Fact 3-3	NC of Foil 1-1	NC of Foil 2-2	NC of Foil 3-3	NC Mean of all Fact	NC Mean of all Foil
NC of Foil 1-1	Pearson r	0.596	0.220	1.000	0.735	0.507	0.559	0.853
	Sig. (2-tailed)	0.001	0.242	--	0.000	0.004	0.001	0.000
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
NC of Foil 2-2	Pearson r	0.493	0.325	0.735	1.000	0.585	0.545	0.867
	Sig. (2-tailed)	0.006	0.080	0.000	--	0.001	0.002	0.000
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
NC of Foil 3-3	Pearson r	0.377	0.155	0.507	0.585	1.000	0.356	0.8
	Sig. (2-tailed)	0.040	0.414	0.004	0.001	--	0.054	0.00
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
NC Mean of all Fact	Pearson r	0.730	0.834	0.559	0.545	0.356	1.000	0.552
	Sig. (2-tailed)	0.000	0.000	0.001	0.002	0.054	--	0.002
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
NC Mean of all Foil	Pearson r	0.561	0.258	0.853	0.867	0.852	0.552	1.000
	Sig. (2-tailed)	0.001	0.169	0.000	0.000	0.000	0.002	--
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
NC Mean of all Fan 1-1	Pearson r	0.633	0.233	0.979	0.725	0.513	0.618	0.844
	Sig. (2-tailed)	0.000	0.215	0.000	0.000	0.004	0.000	0.000
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
NC Mean of all Fan 2-2	Pearson r	0.783	0.362	0.783	0.927	0.581	0.704	0.861
	Sig. (2-tailed)	0.000	0.050	0.000	0.000	0.001	0.000	0.000
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
NC Mean of all Fan 3-3	Pearson r	0.450	0.650	0.507	0.623	0.852	0.716	0.792
	Sig. (2-tailed)	0.013	0.000	0.004	0.000	0.000	0.000	0.000
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000
Mean of All NC	Pearson r	0.689	0.502	0.844	0.849	0.768	0.783	0.951
	Sig. (2-tailed)	0.000	0.005	0.000	0.000	0.000	0.000	0.000
	N	30.000	30.000	30.000	30.000	30.000	30.000	30.000

Table 6. cont.

Factors	Statistic	NC Mean of all Fan 1-1	NC Mean of all Fan 2-2	NC Mean of all Fan 3-3	Mean of All NC
Age	Pearson r	-0.134	-0.126	-0.134	-0.151
	Sig. (2-tailed)	0.480	0.507	0.481	0.425
	N	30.000	30.000	30.000	30.000
Gender	Pearson r	0.187	0.071	0.117	0.146
	Sig. (2-tailed)	0.322	0.710	0.537	0.441
	N	30.000	30.000	30.000	30.000
Education Level	Pearson r	-0.063	0.107	0.252	0.127
	Sig. (2-tailed)	0.740	0.573	0.179	0.503
	N	30.000	30.000	30.000	30.000
Self-rated Health	Pearson r	-0.107	-0.097	-0.036	-0.087
	Sig. (2-tailed)	0.574	0.609	0.851	0.648
	N	30.000	30.000	30.000	30.000
Number of Medications	Pearson r	-0.139	-0.061	0.095	-0.027
	Sig. (2-tailed)	0.463	0.750	0.617	0.889
	N	30.000	30.000	30.000	30.000
GDS-SF	Pearson r	0.022	-0.058	-0.107	-0.060
	Sig. (2-tailed)	0.908	0.761	0.573	0.753
	N	30.000	30.000	30.000	30.000
STAI state anxiety	Pearson r	-0.174	-0.162	-0.223	-0.219
	Sig. (2-tailed)	0.357	0.392	0.236	0.245
	N	30.000	30.000	30.000	30.000
STAI trait anxiety	Pearson r	0.017	0.133	0.044	0.068
	Sig. (2-tailed)	0.931	0.484	0.818	0.720
	N	30.000	30.000	30.000	30.000
Reading Rate	Pearson r	-0.058	-0.137	0.115	-0.012
	Sig. (2-tailed)	0.759	0.470	0.546	0.952
	N	30.000	30.000	30.000	30.000
WAIS-III Vocab. (raw)	Pearson r	0.304	0.298	0.205	0.302
	Sig. (2-tailed)	0.102	0.109	0.278	0.105
	N	30.000	30.000	30.000	30.000
WAIS-III Vocab. (scaled)	Pearson r	0.247	0.232	0.128	0.224
	Sig. (2-tailed)	0.189	0.218	0.499	0.235
	N	30.000	30.000	30.000	30.000
Number of Trials	Pearson r	-0.092	-0.142	0.071	-0.046
	Sig. (2-tailed)	0.627	0.453	0.709	0.809
	N	30.000	30.000	30.000	30.000
Mood-group	Pearson r	0.257	0.232	0.031	0.183
	Sig. (2-tailed)	0.171	0.217	0.869	0.334
	N	30.000	30.000	30.000	30.000
DACL-A	Pearson r	0.136	0.258	-0.013	0.125
	Sig. (2-tailed)	0.474	0.169	0.946	0.509
	N	30.000	30.000	30.000	30.000
DACL-B	Pearson r	0.114	0.230	0.044	0.135
	Sig. (2-tailed)	0.548	0.222	0.816	0.476
	N	30.000	30.000	30.000	30.000

Table 6. cont.

Factors	Statistic	NC Mean of all Fan 1-1	NC Mean of all Fan 2-2	NC Mean of all Fan 3-3	Mean of All NC
RT of Fact 1-1	Pearson r	-0.119	0.063	-0.275	-0.152
	Sig. (2-tailed)	0.531	0.741	0.141	0.423
	N	30.000	30.000	30.000	30.000
RT of Fact 2-2	Pearson r	-0.031	0.044	-0.291	-0.133
	Sig. (2-tailed)	0.871	0.817	0.118	0.485
	N	30.000	30.000	30.000	30.000
RT of Fact 3-3	Pearson r	0.100	0.210	-0.255	-0.016
	Sig. (2-tailed)	0.601	0.266	0.173	0.935
	N	30.000	30.000	30.000	30.000
RT of Foil 1-1	Pearson r	-0.165	-0.058	-0.508	-0.315
	Sig. (2-tailed)	0.385	0.763	0.004	0.090
	N	30.000	30.000	30.000	30.000
RT of Foil 2-2	Pearson r	-0.229	-0.197	-0.406	-0.335
	Sig. (2-tailed)	0.224	0.296	0.026	0.070
	N	30.000	30.000	30.000	30.000
RT of Foil 3-3	Pearson r	0.176	0.393	0.105	0.238
	Sig. (2-tailed)	0.351	0.031	0.580	0.206
	N	30.000	30.000	30.000	30.000
RT Mean of all Fact	Pearson r	-0.010	0.120	-0.297	-0.104
	Sig. (2-tailed)	0.959	0.526	0.111	0.586
	N	30.000	30.000	30.000	30.000
RT Mean of all Foil	Pearson r	-0.058	0.092	-0.275	-0.120
	Sig. (2-tailed)	0.762	0.629	0.141	0.528
	N	30.000	30.000	30.000	30.000
RT Mean of all Fan 1-1	Pearson r	-0.148	0.000	-0.411	-0.246
	Sig. (2-tailed)	0.434	0.999	0.024	0.191
	N	30.000	30.000	30.000	30.000
RT Mean of all Fan 2-2	Pearson r	-0.136	-0.080	-0.368	-0.246
	Sig. (2-tailed)	0.472	0.674	0.045	0.189
	N	30.000	30.000	30.000	30.000
RT Mean of all Fan 3-3	Pearson r	0.150	0.329	-0.066	0.128
	Sig. (2-tailed)	0.429	0.076	0.730	0.499
	N	30.000	30.000	30.000	30.000
Mean of All RT	Pearson r	-0.034	0.108	-0.290	-0.113
	Sig. (2-tailed)	0.858	0.571	0.120	0.551
	N	30.000	30.000	30.000	30.000
NC of Fact 1-1	Pearson r	0.826	0.632	0.429	0.703
	Sig. (2-tailed)	0.000	0.000	0.018	0.000
	N	30.000	30.000	30.000	30.000
NC of Fact 2-2	Pearson r	0.633	0.783	0.450	0.689
	Sig. (2-tailed)	0.000	0.000	0.013	0.000
	N	30.000	30.000	30.000	30.000
NC of Fact 3-3	Pearson r	0.233	0.362	0.650	0.502
	Sig. (2-tailed)	0.215	0.050	0.000	0.005
	N	30.000	30.000	30.000	30.000

Table 6. cont.

Factors	Statistic	NC Mean of all Fan 1-1	NC Mean of all Fan 2-2	NC Mean of all Fan 3-3	Mean of All NC
NC of Foil 1-1	Pearson r	0.979	0.783	0.507	0.844
	Sig. (2-tailed)	0.000	0.000	0.004	0.000
	N	30.000	30.000	30.000	30.000
NC of Foil 2-2	Pearson r	0.725	0.927	0.623	0.849
	Sig. (2-tailed)	0.000	0.000	0.000	0.000
	N	30.000	30.000	30.000	30.000
NC of Foil 3-3	Pearson r	0.513	0.581	0.852	0.768
	Sig. (2-tailed)	0.004	0.001	0.000	0.000
	N	30.000	30.000	30.000	30.000
NC Mean of all Fact	Pearson r	0.618	0.704	0.716	0.783
	Sig. (2-tailed)	0.000	0.000	0.000	0.000
	N	30.000	30.000	30.000	30.000
NC Mean of all Foil	Pearson r	0.844	0.861	0.792	0.951
	Sig. (2-tailed)	0.000	0.000	0.000	0.000
	N	30.000	30.000	30.000	30.000
NC Mean of all Fan 1-1	Pearson r	1.000	0.791	0.518	0.859
	Sig. (2-tailed)	--	0.000	0.003	0.000
	N	30.000	30.000	30.000	30.000
NC Mean of all Fan 2-2	Pearson r	0.791	1.000	0.639	0.904
	Sig. (2-tailed)	0.000	--	0.000	0.000
	N	30.000	30.000	30.000	30.000
NC Mean of all Fan 3-3	Pearson r	0.518	0.639	1.000	0.857
	Sig. (2-tailed)	0.003	0.000	--	0.000
	N	30.000	30.000	30.000	30.000
Mean of All NC	Pearson r	0.859	0.904	0.857	1.000
	Sig. (2-tailed)	0.000	0.000	0.000	--
	N	30.000	30.000	30.000	30.000

Table 7. Pearson Product Moment Correlations of All Variables For Younger Completed Participants

Factors	Statistic	Age	Gender	Education Level	Self-rated Health	Number of Medications	GDS-SF	STAI state anxiety
Age	Pearson r	1.000	-0.029	0.444	-0.028	0.006	0.379	0.206
	Sig. (2-tailed)	--	0.777	0.000	0.783	0.954	0.000	0.043
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
Gender	Pearson r	-0.029	1.000	-0.062	0.233	0.199	0.151	0.217
	Sig. (2-tailed)	0.777	--	0.548	0.022	0.050	0.141	0.033
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
Education Level	Pearson r	0.444	-0.062	1.000	-0.041	0.093	0.157	0.064
	Sig. (2-tailed)	0.000	0.548	--	0.691	0.367	0.124	0.536
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
Self-rated Health	Pearson r	-0.028	0.233	-0.041	1.000	0.397	0.383	0.368
	Sig. (2-tailed)	0.783	0.022	0.691	--	0.000	0.000	0.000
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
Number of Medications	Pearson r	0.006	0.199	0.093	0.397	1.000	0.148	0.084
	Sig. (2-tailed)	0.954	0.050	0.367	0.000	--	0.149	0.413
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
GDS-SF	Pearson r	0.379	0.151	0.157	0.383	0.148	1.000	0.599
	Sig. (2-tailed)	0.000	0.141	0.124	0.000	0.149	--	0.000
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
STAI state anxiety	Pearson r	0.206	0.217	0.064	0.368	0.084	0.599	1.000
	Sig. (2-tailed)	0.043	0.033	0.536	0.000	0.413	0.000	--
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
STAI trait anxiety	Pearson r	0.196	0.214	0.070	0.241	0.050	0.641	0.752
	Sig. (2-tailed)	0.054	0.035	0.497	0.017	0.628	0.000	0.000
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
Reading Rate	Pearson r	-0.007	0.026	0.087	0.072	0.118	0.006	0.290
	Sig. (2-tailed)	0.944	0.800	0.398	0.485	0.251	0.956	0.004
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
WAIS-III Vocab. (raw)	Pearson r	0.247	-0.181	0.375	-0.098	0.095	0.083	0.125
	Sig. (2-tailed)	0.015	0.077	0.000	0.338	0.355	0.418	0.221
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
WAIS-III Vocab. (scaled)	Pearson r	0.115	-0.181	0.354	-0.130	0.095	0.004	0.046
	Sig. (2-tailed)	0.261	0.075	0.000	0.204	0.354	0.967	0.654
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
Number of Trials	Pearson r	0.186	0.017	0.142	0.023	-0.020	0.121	-0.014
	Sig. (2-tailed)	0.069	0.867	0.167	0.826	0.850	0.240	0.889
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
Mood-group	Pearson r	-0.018	0.086	-0.091	0.046	0.129	0.088	0.155
	Sig. (2-tailed)	0.858	0.404	0.375	0.653	0.207	0.391	0.130
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
DACL-A	Pearson r	0.107	0.034	0.006	0.118	0.055	0.300	0.318
	Sig. (2-tailed)	0.295	0.743	0.952	0.248	0.590	0.003	0.001
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000

Table 7. cont..

Factors	Statistic	Age	Gender	Education Level	Self-rated Health	Number of Medications	GDS-SF	STAI state anxiety
DACL-B	Pearson r	0.122	0.085	-0.008	0.112	0.148	0.459	0.383
	Sig. (2-tailed)	0.233	0.408	0.934	0.277	0.148	0.000	0.000
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
RT of Fact 1-1	Pearson r	0.094	-0.056	-0.115	0.085	-0.095	0.082	-0.020
	Sig. (2-tailed)	0.359	0.588	0.264	0.410	0.355	0.425	0.847
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
RT of Fact 2-2	Pearson r	0.214	-0.117	-0.010	0.041	-0.089	0.090	-0.004
	Sig. (2-tailed)	0.036	0.256	0.924	0.688	0.384	0.381	0.973
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
RT of Fact 3-3	Pearson r	0.158	-0.090	-0.045	0.080	-0.163	0.080	0.030
	Sig. (2-tailed)	0.122	0.381	0.664	0.434	0.110	0.435	0.770
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
RT of Foil 1-1	Pearson r	0.137	-0.050	-0.057	0.067	-0.075	0.008	0.001
	Sig. (2-tailed)	0.180	0.627	0.581	0.516	0.466	0.935	0.991
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
RT of Foil 2-2	Pearson r	0.050	-0.161	-0.078	0.048	-0.053	-0.042	-0.054
	Sig. (2-tailed)	0.627	0.116	0.450	0.643	0.604	0.683	0.601
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
RT of Foil 3-3	Pearson r	0.105	-0.036	-0.066	0.083	-0.136	0.142	0.054
	Sig. (2-tailed)	0.306	0.729	0.524	0.417	0.183	0.166	0.599
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
RT Mean of all Fact	Pearson r	0.164	-0.093	-0.060	0.074	-0.126	0.089	0.004
	Sig. (2-tailed)	0.108	0.367	0.561	0.470	0.217	0.386	0.968
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
RT Mean of all Foil	Pearson r	0.109	-0.086	-0.075	0.076	-0.106	0.056	0.008
	Sig. (2-tailed)	0.288	0.403	0.468	0.458	0.301	0.584	0.935
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
RT Mean of all Fan 1-1	Pearson r	0.120	-0.055	-0.089	0.079	-0.088	0.047	-0.010
	Sig. (2-tailed)	0.241	0.593	0.385	0.443	0.390	0.646	0.925
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
RT Mean of all Fan 2-2	Pearson r	0.132	-0.145	-0.047	0.046	-0.073	0.021	-0.031
	Sig. (2-tailed)	0.197	0.156	0.646	0.652	0.477	0.838	0.762
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
RT Mean of all Fan 3-3	Pearson r	0.137	-0.063	-0.060	0.088	-0.159	0.123	0.047
	Sig. (2-tailed)	0.180	0.537	0.556	0.392	0.121	0.230	0.650
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
Mean of All RT	Pearson r	0.139	-0.091	-0.069	0.077	-0.119	0.074	0.006
	Sig. (2-tailed)	0.175	0.374	0.501	0.453	0.247	0.473	0.950
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
NC of Fact 1-1	Pearson r	0.124	0.056	0.080	0.089	0.014	0.022	0.029
	Sig. (2-tailed)	0.227	0.588	0.436	0.385	0.896	0.832	0.775
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000

Table 7. cont.

Factors	Statistic	Age	Gender	Education Level	Self-rated Health	Number of Medications	GDS-SF	STAI state anxiety
NC of Fact 2-2	Pearson r	0.079	-0.027	0.080	-0.073	0.009	0.106	-0.010
	Sig. (2-tailed)	0.439	0.793	0.437	0.476	0.934	0.301	0.921
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
NC of Fact 3-3	Pearson r	0.052	-0.009	0.022	-0.027	0.085	0.155	0.093
	Sig. (2-tailed)	0.614	0.927	0.832	0.793	0.407	0.129	0.366
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
NC of Foil 1-1	Pearson r	-0.049	-0.021	-0.236	-0.007	0.039	0.068	0.147
	Sig. (2-tailed)	0.630	0.841	0.020	0.942	0.703	0.509	0.150
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
NC of Foil 2-2	Pearson r	0.104	0.160	0.006	0.020	0.067	0.054	0.011
	Sig. (2-tailed)	0.309	0.117	0.952	0.844	0.516	0.603	0.915
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
NC of Foil 3-3	Pearson r	0.047	-0.039	0.057	-0.145	-0.017	-0.061	-0.135
	Sig. (2-tailed)	0.646	0.703	0.582	0.156	0.867	0.551	0.187
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
NC Mean of all Fact	Pearson r	0.104	0.001	0.070	-0.017	0.067	0.154	0.071
	Sig. (2-tailed)	0.309	0.991	0.498	0.865	0.514	0.131	0.491
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
NC Mean of all Foil	Pearson r	0.064	0.009	0.017	-0.123	0.010	-0.028	-0.094
	Sig. (2-tailed)	0.532	0.933	0.872	0.231	0.923	0.784	0.362
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
NC Mean of all Fan 1-1	Pearson r	0.062	0.029	-0.071	0.060	0.031	0.053	0.101
	Sig. (2-tailed)	0.545	0.779	0.491	0.559	0.763	0.609	0.324
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
NC Mean of all Fan 2-2	Pearson r	0.112	0.093	0.046	-0.025	0.049	0.092	0.002
	Sig. (2-tailed)	0.276	0.364	0.653	0.809	0.632	0.372	0.985
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
NC Mean of all Fan 3-3	Pearson r	0.058	-0.035	0.054	-0.127	0.020	0.013	-0.071
	Sig. (2-tailed)	0.570	0.733	0.600	0.216	0.846	0.903	0.488
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
Mean of All NC	Pearson r	0.093	0.007	0.043	-0.097	0.037	0.049	-0.036
	Sig. (2-tailed)	0.363	0.947	0.674	0.346	0.716	0.635	0.726
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000

Table 7. cont.

Factors	Statistic	STAI trait anxiety	Reading Rate	WAIS-III Vocab. (raw)	WAIS-III Vocab. (scaled)	Number of Trials	Mood-group	DACL-A
Age	Pearson r	0.196	-0.007	0.247	0.115	0.186	-0.018	0.107
	Sig. (2-tailed)	0.054	0.944	0.015	0.261	0.069	0.858	0.295
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
Gender	Pearson r	0.214	0.026	-0.181	-0.181	0.017	0.086	0.034
	Sig. (2-tailed)	0.035	0.800	0.077	0.075	0.867	0.404	0.743
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
Education Level	Pearson r	0.070	0.087	0.375	0.354	0.142	-0.091	0.006
	Sig. (2-tailed)	0.497	0.398	0.000	0.000	0.167	0.375	0.952
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
Self-rated Health	Pearson r	0.241	0.072	-0.098	-0.130	0.023	0.046	0.118
	Sig. (2-tailed)	0.017	0.485	0.338	0.204	0.826	0.653	0.248
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
Number of Medications	Pearson r	0.050	0.118	0.095	0.095	-0.020	0.129	0.055
	Sig. (2-tailed)	0.628	0.251	0.355	0.354	0.850	0.207	0.590
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
GDS-SF	Pearson r	0.641	0.006	0.083	0.004	0.121	0.088	0.300
	Sig. (2-tailed)	0.000	0.956	0.418	0.967	0.240	0.391	0.003
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
STAI state anxiety	Pearson r	0.752	0.290	0.125	0.046	-0.014	0.155	0.318
	Sig. (2-tailed)	0.000	0.004	0.221	0.654	0.889	0.130	0.001
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
STAI trait anxiety	Pearson r	1.000	0.253	0.076	0.019	0.185	0.140	0.314
	Sig. (2-tailed)	--	0.012	0.457	0.854	0.070	0.172	0.002
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
Reading Rate	Pearson r	0.253	1.000	0.382	0.372	0.170	-0.058	-0.032
	Sig. (2-tailed)	0.012	--	0.000	0.000	0.097	0.570	0.754
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
WAIS-III Vocab. (raw)	Pearson r	0.076	0.382	1.000	0.972	-0.015	-0 185	0.042
	Sig. (2-tailed)	0.457	0.000	--	0.000	0.882	0.070	0.685
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
WAIS-III Vocab. (scaled)	Pearson r	0.019	0.372	0.972	1.000	-0.028	-0.212	-0.026
	Sig. (2-tailed)	0.854	0.000	0.000	--	0.784	0.037	0.803
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
Number of Trials	Pearson r	0.185	0.170	-0.015	-0.028	1.000	-0.048	-0.088
	Sig. (2-tailed)	0.070	0.097	0.882	0.784	--	0.643	0.393
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
Mood-group	Pearson r	0.140	-0.058	-0.185	-0.212	-0.048	1.000	0.457
	Sig. (2-tailed)	0.172	0.570	0.070	0.037	0.643	--	0.000
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
DACL-A	Pearson r	0.314	-0.032	0.042	-0.026	-0.088	0.457	1.000
	Sig. (2-tailed)	0.002	0.754	0.685	0.803	0.393	0.000	--
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
DACL-B	Pearson r	0.453	-0.008	-0.008	-0.066	0.159	0.191	0.490
	Sig. (2-tailed)	0.000	0.936	0.941	0.521	0.120	0.061	0.000
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000

Table 7. cont.

Factors	Statistic	STAI trait anxiety	Reading Rate	WAIS-III Vocab. (raw)	WAIS-III Vocab. (scaled)	Number of Trials	Mood-group	DACL-A
RT of Fact 1-1	Pearson r	-0.002	-0.317	-0.448	-0.427	0.030	0.037	-0.039
	Sig. (2-tailed)	0.988	0.002	0.000	0.000	0.773	0.716	0.705
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
RT of Fact 2-2	Pearson r	-0.027	-0.183	-0.317	-0.309	0.075	0.002	-0.004
	Sig. (2-tailed)	0.792	0.073	0.002	0.002	0.467	0.984	0.973
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
RT of Fact 3-3	Pearson r	-0.006	-0.239	-0.357	-0.357	0.118	0.038	0.012
	Sig. (2-tailed)	0.951	0.018	0.000	0.000	0.249	0.709	0.908
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
RT of Foil 1-1	Pearson r	-0.048	-0.245	-0.415	-0.420	0.043	0.015	-0.073
	Sig. (2-tailed)	0.644	0.016	0.000	0.000	0.674	0.886	0.479
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
RT of Foil 2-2	Pearson r	-0.098	-0.147	-0.383	-0.373	0.022	0.042	-0.015
	Sig. (2-tailed)	*0.339*	*0.152*	*0.000*	*0.000*	*0.828*	*0.680*	*0.880*
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
RT of Foil 3-3	Pearson r	-0.007	-0.307	-0.267	-0.263	0.007	-0.007	0.096
	Sig. (2-tailed)	0.947	0.002	0.008	0.009	0.949	0.949	0.352
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
RT Mean of all Fact	Pearson r	-0.012	-0.262	-0.397	-0.388	0.082	0.029	-0.010
	Sig. (2-tailed)	0.909	0.010	0.000	0.000	0.427	0.780	0.926
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
RT Mean of all Foil	Pearson r	-0.051	-0.271	-0.383	-0.379	0.024	0.015	0.018
	Sig. (2-tailed)	0.623	0.007	0.000	0.000	0.816	0.880	0.860
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
RT Mean of all Fan 1-1	Pearson r	-0.025	-0.292	-0.449	-0.441	0.038	0.027	-0.058
	Sig. (2-tailed)	0.805	0.004	0.000	0.000	0.713	0.792	0.572
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
RT Mean of all Fan 2-2	Pearson r	-0.067	-0.170	-0.365	-0.356	0.049	0.024	-0.010
	Sig. (2-tailed)	0.514	0.096	0.000	0.000	0.635	0.814	0.921
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
RT Mean of all Fan 3-3	Pearson r	-0.007	-0.297	-0.328	-0.326	0.059	0.014	0.063
	Sig. (2-tailed)	0.945	0.003	0.001	0.001	0.566	0.893	0.538
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
Mean of All RT	Pearson r	-0.033	-0.273	-0.399	-0.392	0.053	0.022	0.005
	Sig. (2-tailed)	0.750	0.007	0.000	0.000	0.608	0.828	0.961
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
NC of Fact 1-1	Pearson r	-0.104	-0.049	-0.011	-0.025	-0.205	-0.042	-0.036
	Sig. (2-tailed)	0.310	0.634	0.913	0.811	0.044	0.683	0.724
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
NC of Fact 2-2	Pearson r	0.022	-0.019	0.043	0.067	-0.082	-0.236	0.044
	Sig. (2-tailed)	0.830	0.851	0.678	0.515	0.424	0.020	0.668
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
NC of Fact 3-3	Pearson r	0.126	0.148	0.206	0.226	-0.061	-0.163	0.014
	Sig. (2-tailed)	0.219	0.148	0.043	0.026	0.555	0.112	0.895
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000

Table 7. cont.

Factors	Statistic	STAI trait anxiety	Reading Rate	WAIS-III Vocab. (raw)	WAIS-III Vocab. (scaled)	Number of Trials	Mood-group	DACL-A
NC of Foil 1-1	Pearson r	0.083	-0.076	0.092	0.099	-0.364	-0.015	-0.017
	Sig. (2-tailed)	0.418	0.458	0.368	0.336	0.000	0.888	0.869
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
NC of Foil 2-2	Pearson r	-0.043	0.062	0.078	0.091	-0.021	-0.150	-0.086
	Sig. (2-tailed)	0.674	0.546	0.450	0.374	0.839	0.143	0.401
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
NC of Foil 3-3	Pearson r	-0.078	0.015	0.165	0.161	0.113	-0.242	-0.037
	Sig. (2-tailed)	0.446	0.881	0.107	0.114	0.271	0.017	0.719
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
NC Mean of all Fact	Pearson r	0.063	0.081	0.157	0.175	-0.137	-0.213	0.014
	Sig. (2-tailed)	0.537	0.428	0.125	0.087	0.180	0.036	0.891
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
NC Mean of all Foil	Pearson r	-0.069	0.020	0.180	0.182	0.039	-0.258	-0.060
	Sig. (2-tailed)	0.503	0.845	0.077	0.074	0.703	0.011	0.561
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
NC Mean of all Fan 1-1	Pearson r	-0.030	-0.077	0.042	0.036	-0.346	-0.038	-0.035
	Sig. (2-tailed)	0.772	0.455	0.682	0.726	0.001	0.711	0.731
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
NC Mean of all Fan 2-2	Pearson r	-0.017	0.031	0.075	0.096	-0.057	-0.225	-0.035
	Sig. (2-tailed)	0.865	0.760	0.468	0.348	0.578	0.027	0.737
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
NC Mean of all Fan 3-3	Pearson r	-0.013	0.071	0.214	0.219	0.066	-0.258	-0.024
	Sig. (2-tailed)	0.902	0.489	0.036	0.032	0.519	0.011	0.814
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
Mean of All NC	Pearson r	-0.021	0.051	0.201	0.211	-0.033	-0.283	-0.037
	Sig. (2-tailed)	0.835	0.619	0.048	0.038	0.746	0.005	0.719
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000

Table 7. cont.

Factors	Statistic	DACL-B	RT of Fact 1-1	RT of Fact 2-2	RT of Fact 3-3	RT of Foil 1-1	RT of Foil 2-2	RT of Foil 3-3
Age	Pearson r	0.122	0.094	0.214	0.158	0.137	0.050	0.105
	Sig. (2-tailed)	0.233	0.359	0.036	0.122	0.180	0.627	0.306
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
Gender	Pearson r	0.085	-0.056	-0.117	-0.090	-0.050	-0.161	-0.036
	Sig. (2-tailed)	0.408	0.588	0.256	0.381	0.627	0.116	0.729
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
Education Level	Pearson r	-0.008	-0.115	-0.010	-0.045	-0.057	-0.078	-0.066
	Sig. (2-tailed)	0.934	0.264	0.924	0.664	0.581	0.450	0.524
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
Self-rated Health	Pearson r	0.112	0.085	0.041	0.080	0.067	0.048	0.083
	Sig. (2-tailed)	0.277	0.410	0.688	0.434	0.516	0.643	0.417
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
Number of Medications	Pearson r	0.148	-0.095	-0.089	-0.163	-0.075	-0.053	-0.136
	Sig. (2-tailed)	0.148	0.355	0.384	0.110	0.466	0.604	0.183
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
GDS-SF	Pearson r	0.459	0.082	0.090	0.080	0.008	-0.042	0.142
	Sig. (2-tailed)	0.000	0.425	0.381	0.435	0.935	0.683	0.166
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
STAI state anxiety	Pearson r	0.383	-0.020	-0.004	0.030	0.001	-0.054	0.054
	Sig. (2-tailed)	0.000	0.847	0.973	0.770	0.991	0.601	0.599
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
STAI trait anxiety	Pearson r	0.453	-0.002	-0.027	-0.006	-0.048	-0.098	-0.007
	Sig. (2-tailed)	0.000	0.988	0.792	0.951	0.644	0.339	0.947
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
Reading Rate	Pearson r	-0.008	-0.317	-0.183	-0.239	-0.245	-0.147	-0.307
	Sig. (2-tailed)	0.936	0.002	0.073	0.018	0.016	0.152	0.002
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
WAIS-III Vocab. (raw)	Pearson r	-0.008	-0.448	-0.317	-0.357	-0.415	-0.383	-0.267
	Sig. (2-tailed)	0.941	0.000	0.002	0.000	0.000	0.000	0.008
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
WAIS-III Vocab. (scaled)	Pearson r	-0.066	-0.427	-0.309	-0.357	-0.420	-0.373	-0.263
	Sig. (2-tailed)	0.521	0.000	0.002	0.000	0.000	0.000	0.009
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
Number of Trials	Pearson r	0.159	0.030	0.075	0.118	0.043	0.022	0.007
	Sig. (2-tailed)	0.120	0.773	0.467	0.249	0.674	0.828	0.949
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
Mood-group	Pearson r	0.191	0.037	0.002	0.038	0.015	0.042	-0.007
	Sig. (2-tailed)	0.061	0.716	0.984	0.709	0.886	0.680	0.949
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
DACL-A	Pearson r	0.490	-0.039	-0.004	0.012	-0.073	-0.015	0.096
	Sig. (2-tailed)	0.000	0.705	0.973	0.908	0.479	0.880	0.352
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
DACL-B	Pearson r	1.000	0.011	-0.027	0.003	-0.045	-0.020	0.058
	Sig. (2-tailed)	--	0.917	0.794	0.979	0.659	0.847	0.573
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000

Table 7. cont.

Factors	Statistic	DACL-B	RT of Fact 1-1	RT of Fact 2-2	RT of Fact 3-3	RT of Foil 1-1	RT of Foil 2-2	RT of Foil 3-3
RT of Fact 1-1	Pearson r	0.011	1.000	0.785	0.830	0.849	0.783	0.633
	Sig. (2-tailed)	0.917	--	0.000	0.000	0.000	0.000	0.000
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
RT of Fact 2-2	Pearson r	-0.027	0.785	1.000	0.862	0.808	0.856	0.690
	Sig. (2-tailed)	0.794	0.000	--	0.000	0.000	0.000	0.000
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
RT of Fact 3-3	Pearson r	0.003	0.830	0.862	1.000	0.819	0.792	0.741
	Sig. (2-tailed)	0.979	0.000	0.000	--	0.000	0.000	0.000
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
RT of Foil 1-1	Pearson r	-0.045	0.849	0.808	0.819	1.000	0.798	0.699
	Sig. (2-tailed)	0.659	0.000	0.000	0.000	--	0.000	0.000
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
RT of Foil 2-2	Pearson r	-0.020	0.783	0.856	0.792	0.798	1.000	0.619
	Sig. (2-tailed)	0.847	0.000	0.000	0.000	0.000	--	0.000
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
RT of Foil 3-3	Pearson r	0.058	0.633	0.690	0.741	0.699	0.619	1.000
	Sig. (2-tailed)	0.573	0.000	0.000	0.000	0.000	0.000	--
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
RT Mean of all Fact	Pearson r	-0.004	0.925	0.934	0.960	0.877	0.859	0.734
	Sig. (2-tailed)	0.969	0.000	0.000	0.000	0.000	0.000	0.000
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
RT Mean of all Foil	Pearson r	0.007	0.824	0.864	0.870	0.907	0.874	0.899
	Sig. (2-tailed)	0.945	0.000	0.000	0.000	0.000	0.000	0.000
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
RT Mean of all Fan 1-1	Pearson r	-0.018	0.962	0.828	0.858	0.961	0.822	0.692
	Sig. (2-tailed)	0.862	0.000	0.000	0.000	0.000	0.000	0.000
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
RT Mean of all Fan 2-2	Pearson r	-0.024	0.813	0.959	0.856	0.833	0.967	0.677
	Sig. (2-tailed)	0.815	0.000	0.000	0.000	0.000	0.000	0.000
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
RT Mean of all Fan 3-3	Pearson r	0.036	0.769	0.819	0.913	0.804	0.743	0.950
	Sig. (2-tailed)	0.724	0.000	0.000	0.000	0.000	0.000	0.000
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
Mean of All RT	Pearson r	0.002	0.893	0.919	0.935	0.914	0.888	0.840
	Sig. (2-tailed)	0.986	0.000	0.000	0.000	0.000	0.000	0.000
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
NC of Fact 1-1	Pearson r	0.010	0.141	0.240	0.282	0.122	0.144	0.232
	Sig. (2-tailed)	0.921	0.168	0.018	0.005	0.232	0.161	0.022
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
NC of Fact 2-2	Pearson r	0.021	0.043	0.044	0.056	0.061	-0.032	0.155
	Sig. (2-tailed)	0.840	0.676	0.668	0.583	0.556	0.753	0.131
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
NC of Fact 3-3	Pearson r	0.032	-0.053	0.003	-0.057	-0.114	-0.040	0.016
	Sig. (2-tailed)	0.753	0.603	0.980	0.576	0.266	0.697	0.879
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000

Table 7. cont.

Factors	Statistic	DACL-B	RT of Fact 1-1	RT of Fact 2-2	RT of Fact 3-3	RT of Foil 1-1	RT of Foil 2-2	RT of Foil 3-3
NC of Foil 1-1	Pearson r	-0.009	0.143	0.047	0.030	0.046	0.036	0.138
	Sig. (2-tailed)	0.930	0.163	0.650	0.771	0.653	0.728	0.179
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
NC of Foil 2-2	Pearson r	-0.072	-0.108	-0.186	-0.151	-0.102	-0.225	0.033
	Sig. (2-tailed)	0.483	0.294	0.068	0.140	0.322	0.027	0.747
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
NC of Foil 3-3	Pearson r	-0.108	-0.112	0.013	-0.015	-0.044	-0.144	0.071
	Sig. (2-tailed)	0.290	0.275	0.900	0.882	0.668	0.158	0.489
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
NC Mean of all Fact	Pearson r	0.033	0.023	0.094	0.069	-0.019	0.005	0.141
	Sig. (2-tailed)	0.745	0.825	0.362	0.500	0.851	0.958	0.169
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
NC Mean of all Foil	Pearson r	-0.117	-0.108	-0.035	-0.052	-0.061	-0.186	0.092
	Sig. (2-tailed)	0.253	0.293	0.731	0.610	0.553	0.068	0.368
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
NC Mean of all Fan 1-1	Pearson r	0.002	0.179	0.198	0.219	0.113	0.123	0.242
	Sig. (2-tailed)	0.981	0.079	0.052	0.031	0.269	0.231	0.017
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
NC Mean of all Fan 2-2	Pearson r	-0.037	-0.050	-0.102	-0.071	-0.036	-0.168	0.104
	Sig. (2-tailed)	0.716	0.629	0.322	0.487	0.724	0.101	0.313
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
NC Mean of all Fan 3-3	Pearson r	-0.074	-0.111	0.011	-0.035	-0.080	-0.131	0.063
	Sig. (2-tailed)	0.472	0.281	0.912	0.733	0.433	0.200	0.539
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
Mean of All NC	Pearson r	-0.070	-0.068	0.016	-0.007	-0.053	-0.132	0.130
	Sig. (2-tailed)	0.496	0.508	0.873	0.947	0.607	0.196	0.204
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000

Table 7. cont.

Factors	Statistic	RT Mean of all Fact	RT Mean of all Foil	RT Mean of all Fan 1-1	RT Mean of all Fan 2-2	RT Mean of all Fan 3-3	Mean of All RT	NC of Fact 1-1
Age	Pearson r	0.164	0.109	0.120	0.132	0.137	0.139	0.124
	Sig. (2-tailed)	0.108	0.288	0.241	0.197	0.180	0.175	0.227
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
Gender	Pearson r	-0.093	-0.086	-0.055	-0.145	-0.063	-0.091	0.056
	Sig. (2-tailed)	0.367	0.403	0.593	0.156	0.537	0.374	0.588
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
Education Level	Pearson r	-0.060	-0.075	-0.089	-0.047	-0.060	-0.069	0.080
	Sig. (2-tailed)	0.561	0.468	0.385	0.646	0.556	0.501	0.436
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
Self-rated Health	Pearson r	0.074	0.076	0.079	0.046	0.088	0.077	0.089
	Sig. (2-tailed)	0.470	0.458	0.443	0.652	0.392	0.453	0.385
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
Number of Medications	Pearson r	-0.126	-0.106	-0.088	-0.073	-0.159	-0.119	0.014
	Sig. (2-tailed)	0.217	0.301	0.390	0.477	0.121	0.247	0.896
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
GDS-SF	Pearson r	0.089	0.056	0.047	0.021	0.123	0.074	0.022
	Sig. (2-tailed)	0.386	0.584	0.646	0.838	0.230	0.473	0.832
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
STAI state anxiety	Pearson r	0.004	0.008	-0.010	-0.031	0.047	0.006	0.029
	Sig. (2-tailed)	0.968	0.935	0.925	0.762	0.650	0.950	0.775
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
STAI trait anxiety	Pearson r	-0.012	-0.051	-0.025	-0.067	-0.007	-0.033	-0.104
	Sig. (2-tailed)	0.909	0.623	0.805	0.514	0.945	0.750	0.310
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
Reading Rate	Pearson r	-0.262	-0.271	-0.292	-0.170	-0.297	-0.273	-0.049
	Sig. (2-tailed)	0.010	0.007	0.004	0.096	0.003	0.007	0.634
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
WAIS-III Vocab. (raw)	Pearson r	-0.397	-0.383	-0.449	-0.365	-0.328	-0.399	-0.011
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.001	0.000	0.913
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
WAIS-III Vocab. (scaled)	Pearson r	-0.388	-0.379	-0.441	-0.356	-0.326	-0.392	-0.025
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.001	0.000	0.811
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
Number of Trials	Pearson r	0.082	0.024	0.038	0.049	0.059	0.053	-0.205
	Sig. (2-tailed)	0.427	0.816	0.713	0.635	0.566	0.608	0.044
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
Mood-group	Pearson r	0.029	0.015	0.027	0.024	0.014	0.022	-0.042
	Sig. (2-tailed)	0.780	0.880	0.792	0.814	0.893	0.828	0.683
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
DACL-A	Pearson r	-0.010	0.018	-0.058	-0.010	0.063	0.005	-0.036
	Sig. (2-tailed)	0.926	0.860	0.572	0.921	0.538	0.961	0.724
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
DACL-B	Pearson r	-0.004	0.007	-0.018	-0.024	0.036	0.002	0.010
	Sig. (2-tailed)	0.969	0.945	0.862	0.815	0.724	0.986	0.921
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000

Table 7. cont.

Factors	Statistic	RT Mean of all Fact	RT Mean of all Foil	RT Mean of all Fan 1-1	RT Mean of all Fan 2-2	RT Mean of all Fan 3-3	Mean of All RT	NC of Fact 1-1
RT of Fact 1-1	Pearson r	0.925	0.824	0.962	0.813	0.769	0.893	0.141
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	0.000	0.168
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
RT of Fact 2-2	Pearson r	0.934	0.864	0.828	0.959	0.819	0.919	0.240
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	0.000	0.018
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
RT of Fact 3-3	Pearson r	0.960	0.870	0.858	0.856	0.913	0.935	0.282
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	0.000	0.005
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
RT of Foil 1-1	Pearson r	0.877	0.907	0.961	0.833	0.804	0.914	0.122
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	0.000	0.232
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
RT of Foil 2-2	Pearson r	0.859	0.874	0.822	0.967	0.743	0.888	0.144
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	0.000	0.161
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
RT of Foil 3-3	Pearson r	0.734	0.899	0.692	0.677	0.950	0.840	0.232
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	0.000	0.022
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
RT Mean of all Fact	Pearson r	1.000	0.907	0.937	0.929	0.891	0.974	0.238
	Sig. (2-tailed)	--	0.000	0.000	0.000	0.000	0.000	0.019
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
RT Mean of all Foil	Pearson r	0.907	1.000	0.900	0.902	0.949	0.978	0.196
	Sig. (2-tailed)	0.000	--	0.000	0.000	0.000	0.000	0.054
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
RT Mean of all Fan 1-1	Pearson r	0.937	0.900	1.000	0.856	0.818	0.940	0.137
	Sig. (2-tailed)	0.000	0.000	--	0.000	0.000	0.000	0.180
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
RT Mean of all Fan 2-2	Pearson r	0.929	0.902	0.856	1.000	0.808	0.937	0.196
	Sig. (2-tailed)	0.000	0.000	0.000	--	0.000	0.000	0.054
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
RT Mean of all Fan 3-3	Pearson r	0.891	0.949	0.818	0.808	1.000	0.943	0.272
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	--	0.000	0.007
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
Mean of All RT	Pearson r	0.974	0.978	0.940	0.937	0.943	1.000	0.222
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	--	0.029
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
NC of Fact 1-1	Pearson r	0.238	0.196	0.137	0.196	0.272	0.222	1.000
	Sig. (2-tailed)	0.019	0.054	0.180	0.054	0.007	0.029	--
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
NC of Fact 2-2	Pearson r	0.051	0.082	0.054	0.004	0.120	0.069	0.220
	Sig. (2-tailed)	0.617	0.426	0.601	0.970	0.242	0.503	0.030
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
NC of Fact 3-3	Pearson r	-0.040	-0.041	-0.087	-0.021	-0.017	-0.042	0.145
	Sig. (2-tailed)	0.696	0.691	0.397	0.841	0.867	0.686	0.156
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000

Table 7. cont.

Factors	Statistic	RT Mean of all Fact	RT Mean of all Foil	RT Mean of all Fan 1-1	RT Mean of all Fan 2-2	RT Mean of all Fan 3-3	Mean of All RT	NC of Fact 1-1
NC of Foil 1-1	Pearson r	0.075	0.092	0.098	0.042	0.097	0.086	0.236
	Sig. (2-tailed)	0.463	0.370	0.337	0.680	0.343	0.402	0.020
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
NC of Foil 2-2	Pearson r	-0.157	-0.090	-0.109	-0.214	-0.050	-0.125	0.166
	Sig. (2-tailed)	0.124	0.380	0.289	0.035	0.627	0.222	0.105
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
NC of Foil 3-3	Pearson r	-0.040	-0.028	-0.081	-0.073	0.036	-0.034	0.042
	Sig. (2-tailed)	0.699	0.788	0.429	0.479	0.727	0.739	0.680
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
NC Mean of all Fact	Pearson r	0.066	0.063	0.002	0.049	0.117	0.066	0.498
	Sig. (2-tailed)	0.522	0.539	0.985	0.635	0.252	0.521	0.000
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
NC Mean of all Foil	Pearson r	-0.069	-0.037	-0.088	-0.119	0.032	-0.053	0.126
	Sig. (2-tailed)	0.502	0.722	0.392	0.245	0.759	0.604	0.242
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
NC Mean of all Fan 1-1	Pearson r	0.213	0.192	0.152	0.164	0.249	0.206	0.849
	Sig. (2-tailed)	0.037	0.060	0.136	0.108	0.014	0.042	0.000
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
NC Mean of all Fan 2-2	Pearson r	-0.078	-0.017	-0.045	-0.142	0.030	-0.048	0.227
	Sig. (2-tailed)	0.446	0.865	0.664	0.166	0.774	0.643	0.026
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
NC Mean of all Fan 3-3	Pearson r	-0.048	-0.038	-0.099	-0.066	0.022	-0.044	0.092
	Sig. (2-tailed)	0.643	0.710	0.333	0.518	0.831	0.670	0.373
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
Mean of All NC	Pearson r	-0.020	0.002	-0.063	-0.064	0.076	-0.009	0.311
	Sig. (2-tailed)	0.843	0.985	0.540	0.530	0.461	0.931	0.002
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000

Table 7, cont.

Factors	Statistic	NC of Fact 2-2	NC of Fact 3-3	NC of Foil 1-1	NC of Foil 2-2	NC of Foil 3-3	NC Mean of all Fact	NC Mean of all Foil
Age	Pearson r	0.079	0.052	-0.049	0.104	0.047	0.104	0.064
	Sig. (2-tailed)	0.439	0.614	0.630	0.309	0.646	0.309	0.532
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
Gender	Pearson r	-0.027	-0.009	-0.021	0.160	-0.039	0.001	0.009
	Sig. (2-tailed)	0.793	0.927	0.841	0.117	0.703	0.991	0.933
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
Education Level	Pearson r	0.080	0.022	-0.236	0.006	0.057	0.070	0.017
	Sig. (2-tailed)	0.437	0.832	0.020	0.952	0.582	0.498	0.872
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
Self-rated Health	Pearson r	-0.073	-0.027	-0.007	0.020	-0.145	-0.017	-0.123
	Sig. (2-tailed)	0.476	0.793	0.942	0.844	0.156	0.865	0.231
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
Number of Medications	Pearson r	0.009	0.085	0.039	0.067	-0.017	0.067	0.010
	Sig. (2-tailed)	0.934	0.407	0.703	0.516	0.867	0.514	0.923
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
GDS-SF	Pearson r	0.106	0.155	0.068	0.054	-0.061	0.154	-0.028
	Sig. (2-tailed)	0.301	0.129	0.509	0.603	0.551	0.131	0.784
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
STAI state anxiety	Pearson r	-0.010	0.093	0.147	0.011	-0.135	0.071	-0.094
	Sig. (2-tailed)	0.921	0.366	0.150	0.915	0.187	0.491	0.362
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
STAI trait anxiety	Pearson r	0.022	0.126	0.083	-0.043	-0.078	0.063	-0.069
	Sig. (2-tailed)	0.830	0.219	0.418	0.674	0.446	0.537	0.503
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
Reading Rate	Pearson r	-0.019	0.148	-0.076	0.062	0.015	0.081	0.020
	Sig. (2-tailed)	0.851	0.148	0.458	0.546	0.881	0.428	0.845
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
WAIS-III Vocab. (raw)	Pearson r	0.043	0.206	0.092	0.078	0.165	0.157	0.180
	Sig. (2-tailed)	0.678	0.043	0.368	0.450	0.107	0.125	0.077
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
WAIS-III Vocab. (scaled)	Pearson r	0.067	0.226	0.099	0.091	0.161	0.175	0.182
	Sig. (2-tailed)	0.515	0.026	0.336	0.374	0.114	0.087	0.074
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
Number of Trials	Pearson r	-0.082	-0.061	-0.364	-0.021	0.113	-0.137	0.039
	Sig. (2-tailed)	0.424	0.555	0.000	0.839	0.271	0.180	0.703
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
Mood-group	Pearson r	-0.236	-0.163	-0.015	-0.150	-0.242	-0.213	-0.258
	Sig. (2-tailed)	0.020	0.112	0.888	0.143	0.017	0.036	0.011
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
DACL-A	Pearson r	0.044	0.014	-0.017	-0.086	-0.037	0.014	-0.060
	Sig. (2-tailed)	0.668	0.895	0.869	0.401	0.719	0.891	0.561
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
DACL-B	Pearson r	0.021	0.032	-0.009	-0.072	-0.108	0.033	-0.117
	Sig. (2-tailed)	0.840	0.753	0.930	0.483	0.290	0.745	0.253
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000

Table 7. cont.

Factors	Statistic	NC of Fact 2-2	NC of Fact 3-3	NC of Foil 1-1	NC of Foil 2-2	NC of Foil 3-3	NC Mean of all Fact	NC Mean of all Foil
RT of Fact 1-1	Pearson r	0.043	-0.053	0.143	-0.108	-0.112	0.023	-0.108
	Sig. (2-tailed)	0.676	0.603	0.163	0.294	0.275	0.825	0.293
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
RT of Fact 2-2	Pearson r	0.044	0.003	0.047	-0.186	0.013	0.094	-0.035
	Sig. (2-tailed)	0.668	0.980	0.650	0.068	0.900	0.362	0.731
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
RT of Fact 3-3	Pearson r	0.056	-0.057	0.030	-0.151	-0.015	0.069	-0.052
	Sig. (2-tailed)	0.583	0.576	0.771	0.140	0.882	0.500	0.610
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
RT of Foil 1-1	Pearson r	0.061	-0.114	0.046	-0.102	-0.044	-0.019	-0.061
	Sig. (2-tailed)	0.556	0.266	0.653	0.322	0.668	0.851	0.553
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
RT of Foil 2-2	Pearson r	-0.032	-0.040	0.036	-0.225	-0.144	0.005	-0.186
	Sig. (2-tailed)	0.753	0.697	0.728	0.027	0.158	0.958	0.068
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
RT of Foil 3-3	Pearson r	0.155	0.016	0.138	0.033	0.071	0.141	0.092
	Sig. (2-tailed)	0.131	0.879	0.179	0.747	0.489	0.169	0.368
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
RT Mean of all Fact	Pearson r	0.051	-0.040	0.075	-0.157	-0.040	0.066	-0.069
	Sig. (2-tailed)	0.617	0.696	0.463	0.124	0.699	0.522	0.502
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
RT Mean of all Foil	Pearson r	0.082	-0.041	0.092	-0.090	-0.028	0.063	-0.037
	Sig. (2-tailed)	0.426	0.691	0.370	0.380	0.788	0.539	0.722
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
RT Mean of all Fan 1-1	Pearson r	0.054	-0.087	0.098	-0.109	-0.081	0.002	-0.088
	Sig. (2-tailed)	0.601	0.397	0.337	0.289	0.429	0.985	0.392
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
RT Mean of all Fan 2-2	Pearson r	0.004	-0.021	0.042	-0.214	-0.073	0.049	-0.119
	Sig. (2-tailed)	0.970	0.841	0.680	0.035	0.479	0.635	0.245
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
RT Mean of all Fan 3-3	Pearson r	0.120	-0.017	0.097	-0.050	0.036	0.117	0.032
	Sig. (2-tailed)	0.242	0.867	0.343	0.627	0.727	0.252	0.759
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
Mean of All RT	Pearson r	0.069	-0.042	0.086	-0.125	-0.034	0.066	-0.053
	Sig. (2-tailed)	0.503	0.686	0.402	0.222	0.739	0.521	0.604
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
NC of Fact 1-1	Pearson r	0.220	0.145	0.236	0.166	0.042	0.498	0.120
	Sig. (2-tailed)	0.030	0.156	0.020	0.105	0.680	0.000	0.242
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
NC of Fact 2-2	Pearson r	1.000	0.314	0.074	0.388	0.252	0.654	0.344
	Sig. (2-tailed)	--	0.002	0.474	0.000	0.013	0.000	0.001
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
NC of Fact 3-3	Pearson r	0.314	1.000	0.128	0.220	0.320	0.862	0.363
	Sig. (2-tailed)	0.002	--	0.210	0.030	0.001	0.000	0.000
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000

Table 7. cont.

Factors	Statistic	NC of Fact 2-2	NC of Fact 3-3	NC of Foil 1-1	NC of Foil 2-2	NC of Foil 3-3	NC Mean of all Fact	NC Mean of all Foil
NC of Foil 1-1	Pearson r	0.074	0.128	1.000	0.165	0.054	0.192	0.243
	Sig. (2-tailed)	0.474	0.210	--	0.106	0.596	0.060	0.016
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
NC of Foil 2-2	Pearson r	0.388	0.220	0.165	1.000	0.194	0.348	0.482
	Sig. (2-tailed)	0.000	0.030	0.106	--	0.057	0.000	0.000
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
NC of Foil 3-3	Pearson r	0.252	0.320	0.054	0.194	1.000	0.330	0.941
	Sig. (2-tailed)	0.013	0.001	0.596	0.057	--	0.001	0.000
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
NC Mean of all Fact	Pearson r	0.654	0.862	0.192	0.348	0.330	1.000	0.418
	Sig. (2-tailed)	0.000	0.000	0.060	0.000	0.001	--	0.000
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
NC Mean of all Foil	Pearson r	0.344	0.363	0.243	0.482	0.941	0.418	1.000
	Sig. (2-tailed)	0.001	0.000	0.016	0.000	0.000	0.000	--
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
NC Mean of all Fan 1-1	Pearson r	0.198	0.174	0.714	0.209	0.060	0.463	0.219
	Sig. (2-tailed)	0.051	0.087	0.000	0.040	0.558	0.000	0.031
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
NC Mean of all Fan 2-2	Pearson r	0.786	0.313	0.150	0.875	0.262	0.578	0.504
	Sig. (2-tailed)	0.000	0.002	0.144	0.000	0.009	0.000	0.000
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
NC Mean of all Fan 3-3	Pearson r	0.326	0.653	0.094	0.242	0.927	0.606	0.896
	Sig. (2-tailed)	0.001	0.000	0.357	0.017	0.000	0.000	0.000
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000
Mean of All NC	Pearson r	0.543	0.651	0.263	0.506	0.830	0.753	0.913
	Sig. (2-tailed)	0.000	0.000	0.009	0.000	0.000	0.000	0.000
	N	97.000	97.000	97.000	97.000	97.000	97.000	97.000

Table 7. cont.

Factors	Statistic	NC Mean of all Fan 1-1	NC Mean of all Fan 2-2	NC Mean of all Fan 3-3	Mean of All NC
Age	Pearson r	0.062	0.112	0.058	0.093
	Sig. (2-tailed)	0.545	0.276	0.570	0.363
	N	97.000	97.000	97.000	97.000
Gender	Pearson r	0.029	0.093	-0.035	0.007
	Sig. (2-tailed)	0.779	0.364	0.733	0.947
	N	97.000	97.000	97.000	97.000
Education Level	Pearson r	-0.071	0.046	0.054	0.043
	Sig. (2-tailed)	0.491	0.653	0.600	0.674
	N	97.000	97.000	97.000	97.000
Self-rated Health	Pearson r	0.060	-0.025	-0.127	-0.097
	Sig. (2-tailed)	0.559	0.809	0.216	0.346
	N	97.000	97.000	97.000	97.000
Number of Medications	Pearson r	0.031	0.049	0.020	0.037
	Sig. (2-tailed)	0.763	0.632	0.846	0.716
	N	97.000	97.000	97.000	97.000
GDS-SF	Pearson r	0.053	0.092	0.013	0.049
	Sig. (2-tailed)	0.609	0.372	0.903	0.635
	N	97.000	97.000	97.000	97.000
STAI state anxiety	Pearson r	0.101	0.002	-0.071	-0.036
	Sig. (2-tailed)	0.324	0.985	0.488	0.726
	N	97.000	97.000	97.000	97.000
STAI trait anxiety	Pearson r	-0.030	-0.017	-0.013	-0.021
	Sig. (2-tailed)	0.772	0.865	0.902	0.835
	N	97.000	97.000	97.000	97.000
Reading Rate	Pearson r	-0.077	0.031	0.071	0.051
	Sig. (2-tailed)	0.455	0.760	0.489	0.619
	N	97.000	97.000	97.000	97.000
WAIS-III Vocab. (raw)	Pearson r	0.042	0.075	0.214	0.201
	Sig. (2-tailed)	0.682	0.468	0.036	0.048
	N	97.000	97.000	97.000	97.000
WAIS-III Vocab. (scaled)	Pearson r	0.036	0.096	0.219	0.211
	Sig. (2-tailed)	0.726	0.348	0.032	0.038
	N	97.000	97.000	97.000	97.000
Number of Trials	Pearson r	-0.346	-0.057	0.066	-0.033
	Sig. (2-tailed)	0.001	0.578	0.519	0.746
	N	97.000	97.000	97.000	97.000
Mood-group	Pearson r	-0.038	-0.225	-0.258	-0.283
	Sig. (2-tailed)	0.711	0.027	0.011	0.005
	N	97.000	97.000	97.000	97.000
DACL-A	Pearson r	-0.035	-0.035	-0.024	-0.037
	Sig. (2-tailed)	0.731	0.737	0.814	0.719
	N	97.000	97.000	97.000	97.000
DACL-B	Pearson r	0.002	-0.037	-0.074	-0.070
	Sig. (2-tailed)	0.981	0.716	0.472	0.496
	N	97.000	97.000	97.000	97.000

Table 7. cont.

Factors	Statistic	NC Mean of all Fan 1-1	NC Mean of all Fan 2-2	NC Mean of all Fan 3-3	Mean of All NC
RT of Fact 1-1	Pearson r	0.179	-0.050	-0.111	-0.068
	Sig. (2-tailed)	0.079	0.629	0.281	0.508
	N	97.000	97.000	97.000	97.000
RT of Fact 2-2	Pearson r	0.198	-0.102	0.011	0.016
	Sig. (2-tailed)	0.052	0.322	0.912	0.873
	N	97.000	97.000	97.000	97.000
RT of Fact 3-3	Pearson r	0.219	-0.071	-0.035	-0.007
	Sig. (2-tailed)	0.031	0.487	0.733	0.947
	N	97.000	97.000	97.000	97.000
RT of Foil 1-1	Pearson r	0.113	-0.036	-0.080	-0.053
	Sig. (2-tailed)	0.269	0.724	0.433	0.607
	N	97.000	97.000	97.000	97.000
RT of Foil 2-2	Pearson r	0.123	-0.168	-0.131	-0.132
	Sig. (2-tailed)	0.231	0.101	0.200	0.196
	N	97.000	97.000	97.000	97.000
RT of Foil 3-3	Pearson r	0.242	0.104	0.063	0.130
	Sig. (2-tailed)	0.017	0.313	0.539	0.204
	N	97.000	97.000	97.000	97.000
RT Mean of all Fact	Pearson r	0.213	-0.078	-0.048	-0.020
	Sig. (2-tailed)	0.037	0.446	0.643	0.843
	N	97.000	97.000	97.000	97.000
RT Mean of all Foil	Pearson r	0.192	-0.017	-0.038	0.002
	Sig. (2-tailed)	0.060	0.865	0.710	0.985
	N	97.000	97.000	97.000	97.000
RT Mean of all Fan 1-1	Pearson r	0.152	-0.045	-0.099	-0.063
	Sig. (2-tailed)	0.136	0.664	0.333	0.540
	N	97.000	97.000	97.000	97.000
RT Mean of all Fan 2-2	Pearson r	0.164	-0.142	-0.066	-0.064
	Sig. (2-tailed)	0.108	0.166	0.518	0.530
	N	97.000	97.000	97.000	97.000
RT Mean of all Fan 3-3	Pearson r	0.249	0.030	0.022	0.076
	Sig. (2-tailed)	0.014	0.774	0.831	0.461
	N	97.000	97.000	97.000	97.000
Mean of All RT	Pearson r	0.206	-0.048	-0.044	-0.009
	Sig. (2-tailed)	0.042	0.643	0.670	0.931
	N	97.000	97.000	97.000	97.000
NC of Fact 1-1	Pearson r	0.849	0.227	0.092	0.311
	Sig. (2-tailed)	0.000	0.026	0.373	0.002
	N	97.000	97.000	97.000	97.000
NC of Fact 2-2	Pearson r	0.198	0.786	0.326	0.543
	Sig. (2-tailed)	0.051	0.000	0.001	0.000
	N	97.000	97.000	97.000	97.000
NC of Fact 3-3	Pearson r	0.174	0.313	0.653	0.651
	Sig. (2-tailed)	0.087	0.002	0.000	0.000
	N	97.000	97.000	97.000	97.000

Table 7. cont.

Factors	Statistic	NC Mean of all Fan 1-1	NC Mean of all Fan 2-2	NC Mean of all Fan 3-3	Mean of All NC
NC of Foil 1-1	Pearson r	0.714	0.150	0.094	0.263
	Sig. (2-tailed)	0.000	0.144	0.357	0.009
	N	97.000	97.000	97.000	97.000
NC of Foil 2-2	Pearson r	0.209	0.875	0.242	0.506
	Sig. (2-tailed)	0.040	0.000	0.017	0.000
	N	97.000	97.000	97.000	97.000
NC of Foil 3-3	Pearson r	0.060	0.262	0.927	0.830
	Sig. (2-tailed)	0.558	0.009	0.000	0.000
	N	97.000	97.000	97.000	97.000
NC Mean of all Fact	Pearson r	0.463	0.578	0.606	0.753
	Sig. (2-tailed)	0.000	0.000	0.000	0.000
	N	97.000	97.000	97.000	97.000
NC Mean of all Foil	Pearson r	0.219	0.504	0.896	0.913
	Sig. (2-tailed)	0.031	0.000	0.000	0.000
	N	97.000	97.000	97.000	97.000
NC Mean of all Fan 1-1	Pearson r	1.000	0.245	0.117	0.367
	Sig. (2-tailed)	--	0.016	0.253	0.000
	N	97.000	97.000	97.000	97.000
NC Mean of all Fan 2-2	Pearson r	0.245	1.000	0.334	0.625
	Sig. (2-tailed)	0.016	--	0.001	0.000
	N	97.000	97.000	97.000	97.000
NC Mean of all Fan 3-3	Pearson r	0.117	0.334	1.000	0.922
	Sig. (2-tailed)	0.253	0.001	--	0.000
	N	97.000	97.000	97.000	97.000
Mean of All NC	Pearson r	0.367	0.625	0.922	1.000
	Sig. (2-tailed)	0.000	0.000	0.000	--
	N	97.000	97.000	97.000	97.000

Table 11. Summary of results from Four-way ANOVA Age-group by Mood-group by Fan by Probe: Data of All Completed Younger and Older Participants

Effect	F[a]	Hypothesis df	Error df	Sig. of F
DACL	29.436	1	123	0.000
DACL	29.436	1	123	0.000
DACL * AGE-GROUP	0.007	1	123	0.936
DACL * MOOD-GROUP	11.864	1	123	0.001
DACL * AGE-GROUP * MOOD-GROUP	0.106	1	123	0.746

a Exact statistic

Table 12. Summary of results from Four-way ANCOVA Age-group by Mood-group by Fan by Probe: Number Correct Data of All Completed Younger and Older Participants

Covariates	B	Beta	Std. Error	T-value	Sig. of T
GDS-SF	0.311	0.138	0.209	1.483	0.141
STAI state anxiety	0.092	0.189	0.051	1.808	0.073
STAI trait anxiety	0.100	0.194	0.057	1.764	0.080

Effect	F[a]	Hypothesis df	Error df	Sig. of F
DACL	29.436	1	123	0.000
DACL	29.436	1	123	0.000
DACL * AGE-GROUP	0.010	1	123	0.936
DACL * MOOD-GROUP	11.864	1	123	0.001
DACL * AGE-GROUP * MOOD-GROUP	0.106	1	123	0.746

a Exact statistic

Table 13. Summary of results from Four-way ANOVA Age-group by Mood-group by Fan by Probe: Reaction Time Data of All Completed Younger and Older Participants

Effect	F[a]	Hypothesis df	Error df	Sig. of F
AGE-GROUP	22.77	1	123	0.000
MOOD-GROUP	0.17	1	123	0.680
AGE-GROUP * MOOD-GROUP	0.04	1	123	0.839
FAN	75.015	2	122	0.000
FAN * AGE-GROUP	0.224	2	122	0.800
FAN * MOOD-GROUP	0.297	2	122	0.743
FAN * AGE-GROUP * MOOD-GROUP	0.365	2	122	0.695
PROBE	141.52	1	123	0.000
PROBE * AGE-GROUP	9.61	1	123	0.002
PROBE * MOOD-GROUP	0.18	1	123	0.673
PROBE * AGE-GROUP * MOOD-GROUP	0.03	1	123	0.871
FAN * PROBE	34.056	2	122	0.000
FAN * PROBE * AGE-GROUP	1.625	2	122	0.201
FAN * PROBE * MOOD-GROUP	0.390	2	122	0.678
FAN * PROBE * AGE-GROUP * MOOD-GROUP	0.796	2	122	0.454

a Exact statistic

Table 14. Summary of results from Four-way ANCOVA Age-group by Mood-group by Fan by Probe: Reaction Time Data of All Completed Younger and Older Participants

Covariates	B	Beta	Std. Error	T-value	Sig. of T
GENDER	-209.618	-0.172	94.316	-2.233	0.028
READING RATE	-1.296	-0.169	.622	-2.083	0.039
STAI TRAIT ANXIETY	7.921	0.130	4.904	1.615	0.109
WAIS-III VOCABULARY	-20.289	-0.315	5.419	-3.744	0.000

Effect	F[a]	Hypoth. df	Error df	Sig. of F
AGE-GROUP	35.83	1	119	0.000
MOOD-GROUP	0.22	1	119	0.643
AGE-GROUP * MOOD-GROUP	0.99	1	199	0.322
FAN	75.015	2	122	0.000
FAN * AGE-GROUP	0.224	2	122	0.800
FAN * MOOD-GROUP	0.297	2	122	0.743
FAN * AGE-GROUP * MOOD-GROUP	0.365	2	122	0.695
PROBE	141.52	1	123	0.000
PROBE * AGE-GROUP	9.61	1	123	0.002
PROBE * MOOD-GROUP	0.18	1	123	0.673
PROBE * AGE-GROUP * MOOD-GROUP	0.03	1	123	0.871
FAN * PROBE	34.056	2	122	0.000
FAN * PROBE * AGE-GROUP	1.625	2	122	0.201
FAN * PROBE * MOOD-GROUP	0.390	2	122	0.678
FAN * PROBE * AGE-GROUP * MOOD-GROUP	0.796	2	122	0.454

a Exact statistic

Table 15. Summary of results from Four-way ANOVA Age-group by Mood-group by Probe by Fan levels 1-1 & 2-2: Reaction Time Data of All Completed Younger and Older Participants

Effect	F[a]	Hypothesis df	Error df	Sig.
AGE-GROUP	23.94	1	123	0.000
MOOD-GROUP	0.12	1	123	0.734
AGE-GROUP * MOOD-GROUP	0.01	1	123	0.926
FAN	3.07	1	123	0.082
FAN * AGE-GROUP	0.03	1	123	0.872
FAN * MOOD-GROUP	0.45	1	123	0.503
FAN * AGE-GROUP * MOOD-GROUP	0.51	1	123	0.478
PROBE	29.36	1	123	0.000
PROBE * AGE-GROUP	2.78	1	123	0.098
PROBE * MOOD-GROUP	1.17	1	123	0.281
PROBE * AGE-GROUP * MOOD-GROUP	1.77	1	123	0.186
FAN * PROBE	2.29	1	123	0.133
FAN * PROBE * AGE-GROUP	0.00	1	123	0.959
FAN * PROBE * MOOD-GROUP	0.24	1	123	0.628
FAN * PROBE * AGE-GROUP * MOOD-GROUP	0.07	1	123	0.797

a Exact statistic

Table 16. Summary of results from Four-way ANCOVA Age-group by Mood-group by Probe by Fan levels 1-1 & 2-2: Reaction Time Data of All Completed Younger and Older Participants

Covariates	B	Beta	Std. Error	T-value	Sig. Of T
GENDER	-212.720	-0.184	88.338	-2.408	0.018
READING RATE	-0.897	-0.124	0.583	-1.539	0.126
STAI TRAIT ANXIETY	6.379	0.111	4.593	1.389	0.167
WAIS-III VOCABULARY	-21.613	-0.354	5.076	-4.258	0.000

Effect	F[a]	Hypoth. df	Error df	Sig. Of F
AGE-GROUP	38.45	1	119	0.000
MOOD-GROUP	0.15	1	119	0.696
AGE-GROUP * MOOD-GROUP	0.80	1	119	0.374
FAN	3.07	1	123	0.082
FAN * AGE-GROUP	0.03	1	123	0.872
FAN * MOOD-GROUP	0.45	1	123	0.503
FAN * AGE-GROUP * MOOD-GROUP	0.51	1	123	0.478
PROBE	29.36	1	123	0.000
PROBE * AGE-GROUP	2.78	1	123	0.098
PROBE * MOOD-GROUP	1.17	1	123	0.281
PROBE * AGE-GROUP * MOOD-GROUP	1.77	1	123	0.186
FAN * PROBE	2.29	1	123	0.133
FAN * PROBE * AGE-GROUP	0.00	1	123	0.959
FAN * PROBE * MOOD-GROUP	0.24	1	123	0.628
FAN * PROBE * AGE-GROUP * MOOD-GROUP	0.07	1	123	0.797

a Exact statistic

Table 17. Summary of results from Four-way ANOVA Age-group by Mood-group by Probe by Fan levels 1-1 & 3-3: Reaction Time Data of All Completed Younger and Older Participants

Effect	F[a]	Hypothesis df	Error df	Sig.
AGE-GROUP	21.18	1	123	0.000
MOOD-GROUP	0.13	1	123	0.724
AGE-GROUP * MOOD-GROUP	0.03	1	123	0.873
FAN	119.27	1	123	0.000
FAN * AGE-GROUP	0.45	1	123	0.505
FAN * MOOD-GROUP	0.34	1	123	0.560
FAN * AGE-GROUP * MOOD-GROUP	0.47	1	123	0.494
PROBE	111.36	1	123	0.000
PROBE * AGE-GROUP	7.77	1	123	0.006
PROBE * MOOD-GROUP	0.07	1	123	0.790
PROBE * AGE-GROUP * MOOD-GROUP	0.13	1	123	0.714
FAN * PROBE	68.07	1	123	0.000
FAN * PROBE * AGE-GROUP	3.08	1	123	0.082
FAN * PROBE * MOOD-GROUP	0.72	1	123	0.399
FAN * PROBE * AGE-GROUP * MOOD-GROUP	1.26	1	123	0.264

a Exact statistic

Table 18. Summary of results from Four-way ANCOVA Age-group by Mood-group by Probe by Fan levels 1-1 & 3-3: Reaction Time Data of All Completed Younger and Older Participants

Covariates	B	Beta	Std. Error	T-value	Sig. Of T
GENDER	-190.247	-0.149	99.118	-1.919	0.057
READING RATE	-1.603	-0.200	0.654	-2.450	0.016
STAI TRAIT ANXIETY	9.399	1.48	5.154	1.824	0.071
WAIS-III VOCABULARY	-19.872	-0.295	5.695	-3.489	0.001

Effect	F[a]	Hypoth. df	Error df	Sig. of F
AGE-GROUP	33.92	1	119	0.000
MOOD-GROUP	0.17	1	119	0.682
AGE-GROUP * MOOD-GROUP	0.98	1	119	0.325
FAN	119.27	1	123	0.000
FAN * AGE-GROUP	0.45	1	123	0.505
FAN * MOOD-GROUP	0.34	1	123	0.560
FAN * AGE-GROUP * MOOD-GROUP	0.47	1	123	0.494
PROBE	111.36	1	123	0.000
PROBE * AGE-GROUP	7.77	1	123	0.006
PROBE * MOOD-GROUP	0.07	1	123	0.790
PROBE * AGE-GROUP * MOOD-GROUP	0.13	1	123	0.714
FAN * PROBE	68.07	1	123	0.000
FAN * PROBE * AGE-GROUP	3.08	1	123	0.082
FAN * PROBE * MOOD-GROUP	0.72	1	123	0.399
FAN * PROBE * AGE-GROUP * MOOD-GROUP	1.26	1	123	0.264

a Exact statistic

Table 22. Summary of results from Four-way ANOVA Age-group by Mood-group by Fan by Probe: Number Correct Data of All Completed Younger and Older Participants

Effect	F[a]	Hypothesis df	Error df	Sig. of F
AGE-GROUP	18.50	1	123	0.000
MOOD-GROUP	0.03	1	123	0.863
AGE-GROUP * MOOD-GROUP	5.88	1	123	0.017
FAN	80.310	2	122	0.000
FAN * AGE-GROUP	10.394	2	122	0.000
FAN * MOOD-GROUP	2.560	2	122	0.081
FAN * AGE-GROUP * MOOD-GROUP	0.082	2	122	0.921
PROBE	51.21	1	123	0.000
PROBE * AGE-GROUP	9.72	1	123	0.002
PROBE * MOOD-GROUP	3.83	1	123	0.053
PROBE * AGE-GROUP * MOOD-GROUP	0.73	1	123	0.393
FAN * PROBE	43.339	2	122	0.000
FAN * PROBE * AGE-GROUP	4.023	2	122	0.020
FAN * PROBE * MOOD-GROUP	4.782	2	122	0.010
FAN * PROBE * AGE-GROUP * MOOD-GROUP	1.048	2	122	0.354

a Exact statistic

Table 23. Summary of results from Four-way ANCOVA Age-group by Mood-group by Fan by Probe: Number Correct Data of All Completed Younger and Older Participants

Covariates	B	Beta	Std. Error	T-value	Sig. of T
WAIS-III VOCABULARY	0.025	0.185	0.012	2.126	0.036
EDUCATION LEVEL	0.029	0.046	0.058	0.504	0.615

Effect	F[a]	Hypoth. df	Error df	Sig. Of F
AGE-GROUP	21.39	1	121	0.000
MOOD-GROUP	0.01	1	121	0.922
AGE-GROUP * MOOD-GROUP	3.90	1	121	0.050
FAN	80.311	2	122	0.000
FAN * AGE-GROUP	10.394	2	122	0.000
FAN * MOOD-GROUP	2.560	2	122	0.081
FAN * AGE-GROUP * MOOD-GROUP	0.082	2	122	0.921
PROBE	51.21	1	123	0.000
PROBE * AGE-GROUP	9.72	1	123	0.002
PROBE * MOOD-GROUP	3.83	1	123	0.053
PROBE * AGE-GROUP * MOOD-GROUP	0.73	1	123	0.393
FAN * PROBE	43.339	2	122	0.000
FAN * PROBE * AGE-GROUP	4.023	2	122	0.020
FAN * PROBE * MOOD-GROUP	4.782	2	122	0.010
FAN * PROBE * AGE-GROUP * MOOD-GROUP	1.048	2	122	0.354

a Exact statistic

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